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# **Arms Control**

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# Arms Control

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## CONTENTS

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### EAST EUROPE

#### CZECHOSLOVAKIA

Cabinet Approves NATO-Warsaw Pact CFE Accords [CTK 3 Jan] .....	1
---	---

### NEAR EAST & SOUTH ASIA

#### INDIA

Technology for Use in Missile Warheads Developed [Delhi Radio 18 Dec] .....	2
---	---

#### PAKISTAN

Minister Answers Senate on Indian Missile Program [Islamabad International 24 Dec] .....	2
--	---

### SOVIET UNION

#### GENERAL

Shevardnadze Views Future Prospects for Disarmament [Paris LE FIGARO 22-23 Dec] .....	3
Yazov Year's Statement Notes INF, CFE Implementation [TASS 30 Dec] .....	3
Threat of Nuclear Arms in Collapsing USSR Viewed [Yu. Pinchukov; MOSCOW NEWS No 51, 30 Dec-6 Jan] .....	4
U.S. Press Cited on 1991 Arms Control Prospects [V. Sukhoy; PRAVDA 4 Jan] .....	5

#### START TALKS

U.S. Plans for Third-Generation Nuclear Weapons Examined [V. Belous; SOVETSKAYA ROSSIYA 4 Jan] .....	5
Experts, Officers Discuss Rocket Forces Role [Moscow TV 17 Nov] .....	7
Observer Discusses Value of Strategic Arms Treaty [V. Chernyshev; TASS 27 Dec] .....	13
Chernyshev on Prospects for 'More Radical Talks' [V. Chernyshev; TASS 28 Dec] .....	14

#### CONVENTIONAL FORCES IN EUROPE

Karpov, Kuklev Interviewed on Paris Meeting .....	14
Karpov on CSCE Summit [V.P. Karpov; PRAVITELSTVENNYY VESTNIK No 48, Nov] ....	14
Kuklev on Cuts in Army [V.A. Kuklev; PRAVITELSTVENNYY VESTNIK No 48, Nov] ....	16
Yazov Says Army's 500,000-Man Cut Completed [Moscow International 30 Dec] .....	17
Vasilyev Answers Reader's Criticism on CFE Treaty [G. Vasilyev; PRAVDA 30 Dec] .....	17
TV Shows Soviet Troop Withdrawal From CSFR [Moscow TV 2 Jan] .....	18

#### SHORT-RANGE NUCLEAR FORCES

Commentary Criticizes New UK Nuclear Weapon [A. Malikov; Moscow Radio 27 Dec] .....	18
Nuclear Modernization in Britain Examined [S. Sayenko; Moscow International 28 Dec] .....	19

#### NUCLEAR TESTING

Fate of Semipalatinsk Site Pondered [F.F. Safonov; AGITATOR ARMII I FLOTA No 19, Oct] ....	19
Journalist Visits Nuclear Weapons Facility [O. Falichev; KRASNAYA ZVEZDA 25 Dec] .....	21
Nuclear Test Resumption in Kazakhstan Denied [Moscow International 27 Dec] .....	23
Kazakh Official Quashes Nuclear Test Rumors [O. Stefashin; IZVESTIYA 28 Dec] .....	23

Kazakh President Cited on Future Nuclear Tests [Berlin ADN 1 Jan] .....	23
U.S. Experts Urge Complete Nuclear Test Ban [V. Chernyshev; TASS 3 Jan] .....	23

## CHEMICAL & BIOLOGICAL WEAPONS

Foreign Ministry's Churkin on Delay in CW Accord With U.S. [TASS 4 Jan] .....	24
---	----

## ASIAN SECURITY ISSUES

Hope Seen for Talks on Naval, Air Force Cuts [A. Golts; KRASNAYA ZVEZDA 27 Dec] .....	24
Gorbachev on Disarmament, Confidence-Building in Asia-Pacific [PRAVDA 30 Dec] .....	25

## WEST EUROPE

### CANADA

TORONTO STAR Links CSCE Summit, Dismantling of NATO .....	28
19 November Editorial [THE TORONTO STAR 19 Nov] .....	28
24 November Editorial [THE TORONTO STAR 24 Nov] .....	28

### FRANCE

Senate Report Favors Mobile Missile Project [J. Isnard; LE MONDE 28 Nov] .....	28
First Hades Regiment Operational in 1992 [LE MONDE 1 Dec] .....	29

### GERMANY

Technical, Economic Impact of Arms Disposal Assessed [J. Heyden; WEHRTECHNIK Nov] .....	30
U.S. Plan To Veto UN Nuclear Test Ban Protested [DPA 7 Jan] .....	34

### SWITZERLAND

Effects of Nonproliferation Treaties Assessed [F. Mueller; DIE WELTWOCHTE 1 Nov] .....	35
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## CZECHOSLOVAKIA

### **Cabinet Approves NATO-Warsaw Pact CFE Accords**

*LD0301195291 Prague CTK in English 1813 GMT  
3 Jan 91*

[Text] Prague, January 3 (CTK)—At its first regular session this year, the Czechoslovak cabinet today approved of the agreement on conventional armed forces in Europe [CFE] signed by the leaders of 22 Warsaw Treaty and NATO countries on last November 19. The cabinet also approved an agreement on maximum levels of conventional weapons of Czechoslovakia, Bulgaria, Hungary, Poland, Romania and the USSR, signed on last November 3, under which the equipment of the Czechoslovak Army will be reduced by 1,600 tanks, 2,309 armoured vehicles, 2,335 pieces of artillery and 24 warplanes, compared with 1989.

Commenting on the debate at the cabinet session on the two agreements, First Deputy Foreign Trade Minister Jiri Brabec explained to newsmen that arms reductions can be achieved either by their destruction or sales. He said the amount of weapons sold is much smaller than the amount that is to be liquidated. The period of prosperity of the arms trade, especially in heavy weaponry, has ended due to disarmament and also due to a part of Czechoslovak weapons being obsolete, Brabec said, adding that conversion was an economic, not a political necessity, and affected most the Slovak Republic.

Brabec pointed out that after the conclusion of the Parisian agreement weapons can no longer be sold. He declined to elaborate on the number of weapons sold or on the customers. He said only that so far only fifty per cent have been sold. He stated that Czechoslovakia would not supply weapons to places of possible conflicts, countries with terrorist regimes etc., adding that each sale must be approved by the government. Contracts have been concluded with foreign firms which might not necessarily be the ultimate buyers but must inform Czechoslovakia of the final addressee.

The cabinet agreed to abolish obligatory minimum exchanges of currency for foreign visitors to Czechoslovakia, which applied mainly to visitors from countries outside Europe, with the exception of Canada and the United States, as from January 1.

Meanwhile, Federal Minister of Labour and Social Affairs Petr Miller told the press conference that the government decree on regulated payments for exceeding labour costs and for wage increases covered from profits was one of the basic anti-inflationary measures. The overall volume of labour and other personal costs not subject to regulated payments could reach a national average of up to 3,856 crowns per month (the average untaxed pay in 1990 was about 3,300 crowns per month—28 crowns equals one U.S. dollar).

President of the State Bank of Czechoslovakia Josef Tosovsky told newsmen that negotiations conducted with East European countries on the use of national currencies in tourism had been unsuccessful, with the exception of Hungary, failing to resolve the question of exchange rates. Czechoslovak citizens will have to use convertible currencies for travels to these countries.

**INDIA****Technology for Use in Missile Warheads Developed**

*BK1812112490 Delhi Domestic Service in English  
0830 GMT 18 Dec 90*

[Text] India has joined a select band of countries having Milli Meter Wave—MMW—techniques and system of wireless transmission. Only seven countries, including the United States, Germany, and Britain have acquired this technology so far. Developed by a dedicated group of scientists of the Defense Electronics Applications Laboratory—DEAL—Dehradun, the technology would be utilized in missile warheads.

Briefing newsmen about the developments in this particular field in New Delhi today, the director of DEAL, Mr. V. Prakash Pandlas said that even several potential applications such as portable radars, nonpac satcom terminals, missile heatseekers, smart munition, collision avoidance, all weather imagery, and wide band communication systems.

**PAKISTAN****Minister Answers Senate on Indian Missile Program**

*BK2412091290 Islamabad Overseas Service in English  
0800 GMT 24 Dec 90*

[Text] Foreign Minister Sahabzada Yaqub Khan has said Pakistan is taking practical steps to maintain and

strengthen its defense preparedness to meet the challenges and threats posed to its security. He was making a statement in Senate today on an adjournment motion moved by Professor Khurshid Ahmed regarding Indian missile program and its implications for Pakistan. He said we are viewing with concern India's (?reported) missile development activity which is a grave threat not only to the security of Pakistan, but also to regional and international peace and stability as well.

The foreign minister assured that the government was conscious of its responsibilities to maintain a deterrent capability and the armed forces were fully alive to the need to adopt counter measures.

After statement by the foreign minister, the mover did not press the motion on the assurance that the foreign minister will consult the Ministry of Defense as to how to debate the issue in more details in the house.

Professor Khurshid Ahmed also did not press another adjournment motion after the statement of Sahabzada Yaqub Khan that no important documents relating to defense and security of Pakistan were found missing from the Foreign Office. The chair [speaker] asked the standing committee on information and broadcasting of the house to check the news items in question with the newspapers which carried it.

## GENERAL

### Shevardnadze Views Future Prospects for Disarmament

PM2812093490 Paris LE FIGARO in French  
22-23 Dec 90 p 4

[Interview with then Foreign Minister Eduard Shevardnadze by Pierre Lelouche in Moscow; date not given: "Eduard Shevardnadze: 'Our Problem And Yours Is How To Make Perestroika Succeed...'" ]

[Excerpt] [Lelouche] In Paris you signed the treaty on reducing conventional forces in Europe [CFE]. In your opinion, what are the prospects for disarmament and for East-West relations following the Paris summit?

[Shevardnadze] We are living in a unique period in the history of mankind, and I personally am pleased to be involved in it. The former blocs are now talking about friendship and peace. We have reached a major agreement on Euromissiles, a treaty on the reduction of conventional forces, and we will be signing with the Americans a START treaty on the reduction of strategic weapons.

However, all this is just a beginning. We must make the process irreversible: It is quite apparent in the Gulf crisis that confrontation and the arms race continue, especially in the Near East. It is therefore essential to "globalize" the disarmament effort throughout the entire planet. To this end we believe—and this is our chief priority—that the nuclear disarmament plan put forward by the Soviet Union in 1986 retains its full validity: We must eliminate all nuclear weapons by the year 2000, starting with a global agreement banning all nuclear tests. We were recently forced to resume our nuclear tests, and we have seen how much our neighboring countries, but also our fellow countrymen, want to end this threat to the whole planet's ecology.

Our second priority is to reach a global agreement in the next two years to ban chemical weapons. Our third priority is to establish, within the UN context, a system to control weapons sales, starting by drawing up a system to monitor all weapons supplies throughout the world. Limiting weapons sales and disarming also entails converting weapons industries to civilian purposes: We have started disarming in the USSR, but we are encountering very difficult problems in the conversion field, which has added to the economic difficulties in our country.

[Lelouche] You talk about disarmament, but how do you explain the fact that your country withdrew behind the Urals, before the conclusion of the Paris Treaty, half the heavy equipment (70,000 of the 140,000 pieces of heavy equipment) deployed in central Europe? This equipment therefore escaped the treaty. Is it not a violation of the spirit, of not the letter, of the treaty? If so, how can we trust the USSR?

[Shevardnadze] Technically, first, the treaty does not forbid the redeployment of forces: It simply limits the level of armaments of both alliances in the area from the Atlantic to the Urals. So I will explain to you why we made the withdrawals: The explanation is that we are dealing with vast quantities of armaments. We decided to withdraw from East Germany, Poland, and Czechoslovakia. This represents hundreds of thousands of men and over 100,000 pieces of heavy military equipment—tanks, guns, armored vehicles, and aircraft. Where would you have wanted us to put them?

We began a process of unilateral withdrawal two years ago. At that time we did not know what we would do with all this equipment. Eventually we thought of storing some of it in the European part of the USSR and some of it in the Asiatic regions. We have inherited the legacy of a country in which militarization reached extraordinary levels. Eliminating all these weapons and converting our military industries is a huge task. You want to help us? Buy some of it!

The problem is even worse when it comes to destroying chemical weapons. In the face of the people's protests, we had to close down the plant that we had just constructed for this purpose at Chapayevsk. In other words, it is easier to build weapons than to destroy them. We have no other choice than to bring these forces back home. There is no subterfuge or manipulation in this. Nor do we want to threaten our Asian neighbors: On the contrary, we are seeking a similar agreement with our Chinese neighbors.

Last, we provided a detailed explanation of all this to our American, French, and British partners. They are by now convinced of our good faith. (Footnote) (I received confirmation from the Foreign Ministry that the USSR provided a written explanation of its withdrawals following a verbal and written protest from Washington, London, and Paris. The Ministry says that it is not satisfied with the Soviet explanations. Discussions on this point are continuing in Vienna within the context of the scheduled consultations on the implementation of the Paris Treaty. In Moscow it is believed that Shevardnadze allowed himself to be "overtaken" by the military, which decided itself in January to withdraw the equipment. Hence the embarrassed explanations of Shevardnadze and his colleagues.) [passage omitted]

### Yazov Year's Statement Notes INF, CFE Implementation

LD3012181790 Moscow TASS International  
Service in Russian 1700 GMT 30 Dec 90

[Text] Moscow, 31 December (TASS)—In 1990 the combat power and operational readiness of the Army and fleet have been maintained at a level ensuring the prevention of war and a guaranteed repulse to aggression, Marshal of the Soviet Union and USSR Minister of Defense Dmitry Yazov, said today in a New Year's interview for TASS. Large-scale measures have been

implemented within the framework of military reform, the basis of which was laid by the new defensive doctrine.

In strict accordance with the Intermediate-Range Nuclear Forces [INF] Treaty, he said, shorter-range missiles have been destroyed and the elimination of medium-range missiles continues. In all, 96.4 percent of missiles in the USSR have been destroyed, and 78.8 percent in the United States. The Soviet Union has actually completed a unilateral reduction of half in million of its Armed Forces, and the withdrawal of formations and units from Eastern Europe and Mongolia is in progress.

Dmitriy Yazov touched upon social matters, stressing that providing housing for servicemen and their families remains one of the Armed Forces' most acute problems. There are currently about 177,000 families without apartments. In the 13th five-year period, it is planned to build 24,000 square meters of housing, 19 million square meters of which the Armed Forces will build themselves. In addition, 2 million square meters of housing will be built using funds allocated by the German Government. As a result, the Soviet Armed Forces should gain about 500,000 apartments over the next five-year period, the minister said.

Maintaining the combat readiness of the troops and forces of the fleet at a level which guarantees the prevention of any possible aggression and reliable protection of the sovereignty and state integrity of the USSR from outside encroachments, the defense minister went on, remains the main task of the Armed Forces in 1991. It is envisaged to complete the withdrawal of troops from Czechoslovakia and Hungary, the withdrawal of formations and units from Mongolia, and to start large-scale redeployment of troops onto the territory of the Soviet Union from Germany.

In addition, the defense minister added, in 1991 Soviet Armed Forces will complete fulfillment of the INF Treaty. Reduction of the main types of armaments and military equipment of the ground and air forces (tanks, armoured combat vehicles, artillery systems of 100mm calibre and above, military aircraft and strike helicopters) will begin in accordance with the treaty on conventional armed forces [CFE] in Europe. A great deal of work will need to be carried out in connection with preparations for destruction of strategic offensive weapons if the treaty on a 50 percent cut in strategic offensive weapons is signed.

#### **Threat of Nuclear Arms in Collapsing USSR Viewed**

*PM0201164291 Moscow MOSCOW NEWS in English  
No 51, 30 Dec 90-6 Jan 91 p 12*

[Article by Yuriy Pinchukov: "15 Aspirants for a Nuclear Legacy?"]

[Text] The world is looking upon developments in one of its two superpowers with mixed feelings. Uncertainty

about the future state system in a country covering one-sixth of the Earth's surface engenders various forecasts, including those which envisage the worst imaginable outcome: loss of control over Soviet nuclear weapons, even to the point of seizure of nuclear arms and control systems by warring groups, irresponsible leaders or others.

Hopefully this will never happen. However, it is evident that possession of nuclear weapons may well become the subject of internal political debate before long. The fact of the existence of nuclear weapons in the country restricts the spectrum of possible state systems suitable for the future Soviet Union. This circumstance calls for a strong "centre" authorized to use nuclear arms under conditions of a military emergency. Central control over nuclear weapons—at constant standby during peacetime—inevitably restricts certain functions of the local and regional authorities. Authorities controlling nuclear weapons must also control the entire armed forces, as well as foreign policy, i.e., all aspects of national security.

Totalitarian states strive to acquire superweapons, the possession of which inevitably encourages imperial ambitions, even in democracies. Perhaps the nuclear arsenal imparts additional stability to the command-and-administer system by preserving the legitimacy of control by the central authorities and the defence department over the ICBMs and other nuclear-arms carriers deployed throughout the country. This in addition to the control of the nuclear infra-structure network, including systems of control, communications, missile-attack warning and space monitoring, armed forces related to the nuclear forces and also branches of the defence industry, research organizations and testing facilities "catering" for the nuclear arsenal.

The USSR central government has no territory of its own, therefore the issue about the deployment of nuclear weapons may become critical when the new Union Treaty is negotiated. It will be impossible to simply delegate all national defence to the Union authorities without specifying the most important aspects, i.e., those relating to the issue of nuclear weapons. The USSR Supreme Soviet Defence and State Security Committee believes that the new Union Treaty must give the Centre the nuclear-arms prerogative, while nuclear-arms and infrastructures must be deployed on the territory of one or several sovereign states within the Union. But this approach can hardly be productive, since political-economic relations between the Centre and the Republics are unstable.

I think that "dual nuclear control" agreements between the Centre and individual Republics having nuclear means deployed on their territory might be a more plausible alternative. In this case the Centre's sanction for the use of nuclear weapons could not be effective without specific consent from the head of state of the Republic concerned. Similar agreements exist between the USA and its NATO European allies.

Such partial "decentralization" of the nuclear prerogative would impart additional stability to the existing mechanism of control over nuclear weapons in a situation fraught with the loss of central control over nuclear arms. But it would entail sharing weapons out among the Republics. No one Union Republic except the Russian Federation, perhaps is capable of ensuring the safe functioning of even a small portion of the nuclear arsenal amassed in the USSR unaided. In order to maintain a powerful and sufficiently invulnerable nuclear deterrent, a country must possess vast territory and unhampered access to the sea for nuclear subs, as well as an atomic industry. Otherwise the safety provided by nuclear arms would fail to fulfil their function as a deterrent and would be regarded by neighbouring countries as a provocative factor undermining international security.

Delegation of a part of the nuclear prerogative to the sovereign Union Republics would enable the latter to more actively contribute to the development of the Union's nuclear strategy, as well as to the process of international nuclear disarmament and the slowing down of the international nuclear race. This would lead to the introduction of the elements of democratic control over nuclear arms in this country.

#### **U.S. Press Cited on 1991 Arms Control Prospects**

*PM0701101091 Moscow PRAVDA in Russian  
4 Jan 91 Second Edition p 4*

[Commentary by correspondent V. Sukhoy: "Timetable for the Future; Prospects for Arms Reduction Talks"]

[Text] New York, 3 January—During the first days of the new year a series of documents about the prospects for U.S.-Soviet collaboration in the spheres of arms reduction and elimination has appeared in the American press. Military columnists think that the year 1991 may become an important landmark on the march forward of our two countries towards nuclear arms control and a safer world.

American military analysts consider that after the signing of the Strategic Offensive Weapons Treaty in February, the United States and USSR will begin talks in preparation for the Strategic Offensive Weapons Treaty-2. This agreement will not only reduce strategic offensive arms to minimal levels, but will also place a ban on sea-launched nuclear cruise missiles, as well as mobile land-based nuclear missiles with multiple warheads.

American military specialists predict that in the year ahead the United States and USSR may start a whole series of talks to conclude separate agreements on arms control. The talks may cover the following military spheres:

- comprehensive banning of nuclear weapon testing;
- banning of nuclear weapon deployment on warships;
- transformation of Europe into a nuclear-free zone;
- limitations on the placing of nuclear arms in space;

- considerable reduction of remaining conventional arms;
- elimination of low-trajectory missiles;
- limitations on trading in conventional arms and the transfer of ballistic missile production technology to third countries;
- a bilateral treaty to strengthen monitoring [kontrol] of the nonproliferation of nuclear weapons;
- attainment of accords on individual problems.

American military strategists consider that this will help the United States and the Soviet Union to approach in earnest the idea of global elimination of nuclear weapons.

The year 1991 may lay the foundations for the processes of unilateral reduction of strategic nuclear arsenals. The United States would be able to, say, reduce its nuclear potential to 1,000 units. The Soviet Union would be able to answer in kind, taking into account the specifics of nuclear parity. The United States would be able to halve its military budget—now equivalent to \$300 billion. This would fully answer present U.S. defense requirements, as between 40 and 60 percent of the budget has always been put aside to parry "Soviet intervention" in West Europe.

As we see, there is no shortage of predictions and wishes. They are all based on the fact that the era of the cold war is now behind us, and a new epoch with a different climate has started, characterized by an absence of sharp "frosts" in the area of military confrontation.

## **START TALKS**

#### **U.S. Plans for Third-Generation Nuclear Weapons Examined**

*PM0401164591 Moscow SOVETSKAYA ROSSIYA  
in Russian 4 Jan 91 First Edition p 5*

[Article by Major General V. Belous, candidate of technical sciences: "Neutron Salvo; United States Is Continuing To Develop New Types of Nuclear Weapons"]

[Text] In the pages of certain of our publications you encounter the opinion that the Soviet Union is disarming too slowly and is "deceiving" the West, or so it is claimed, by violating the relevant accords that have been reached. Serious observers believe that this opinion is unfounded. Moreover, it is known that the West is continuing development of new, more modern types of weapons.

Even the ancients were aware that, given even the slightest carelessness or lack of self-control, weapons that are constantly at hand can easily be used. And when you consider that these are the most sophisticated type of nuclear weapons, which are fatal to all life on earth, you can imagine what would happen when, as a result of a small slip, the jinni escapes from the bottle.



It is dangerous even to possess such weapons. The chance factor can never be ruled out.

Despite the fact that peace-loving tendencies are gradually gaining strength and becoming the determining factors in the world policy of the leading world powers, there are people in the United States who simply refuse to abandon the thought of smashing the prevailing strategic parity with the USSR and winning a "victory before the first shot is fired." To this end existing weapons are being improved and new ones created.

Speaking of the danger of the creation of new types of weapons, W. Churchill warned: "The stone age may return on the shining wings of science."

The fact that this danger really exists is shown by the increase in appropriations in the United States for research and development to create the weapons of the future. Thus the share of appropriations spent on research and development increased from 23.4 percent in 1980-1984 to 34 percent in 1990.

Third-generation nuclear weapons occupy a priority place among military research programs. Third-generation nuclear weapons are special charges which, thanks to special design, redistribute the energy of the explosion in favor of one of the casualty-producing factors. Moreover, such a charge may focus the casualty-producing effect in a specific direction, considerably amplifying it.

According to this classification, the "cobalt bomb," on which work was carried out back in the fifties, can be regarded as the first model of such a weapon. The main feature of this weapon is that the nuclear charge is encased in natural cobalt. Under the influence of the radiation of the nuclear explosion the radioactive isotope cobalt-60 is formed, and this, landing as fallout together with the other products of the explosion, creates severe radioactive contamination that kills all living things. Thus it was a question of a radiological weapon intended for warfare on territories remote from the United States.

The first test of a neutron charge took place in Nevada in April 1963. The main casualty-producing factor is a flux of fast high-energy neutrons. These neutrons burst into living cells like projectiles, break molecular bonds, ionize the atoms, create highly chemically active free radicals, the disrupt vital processes. Very great hopes are pinned on neutron weapons as a means of combating enemy tanks.

An American military specialist describes war using neutron weapons as follows in the pages of the journal AMI: "...Retreating in heavy fighting, the U.S. 14th Mechanized Division is repelling enemy attacks. The tank battalions each have seven to eight tanks left. Losses in infantry companies exceed 30 percent. All army and corps reserves have already been committed to battle. No help can be expected from any quarter. According to aviation reconnaissance, two enemy tank divisions and

two motorized rifle divisions are occupying attack assembly positions 15 km from the front line with the intention of delivering the main strike in the 14th Division's defense zone. Hundreds of armored vehicles, echeloned in depth, are already advancing along an eight-km front. Enemy artillery and air strikes are intensifying. The crisis is mounting....

"The barrels of 203.2-mm howitzers rise above gun positions. Fire! There are bright flashes about 150 meters above the enemy combat formations.... In a short while the enemy loses up to 30,000 men. The massive advance is finally disrupted. The 14th Division resolutely goes onto the offensive, driving back the enemy...."

Neutron charges may be used in the future ABM defenses being developed under the SDI program in order to combat the warheads of enemy missiles in flight. In the early eighties research began on creating third-generation weapons with increased electromagnetic impulse (EMI). To achieve this it is necessary to sharply increase the amplitude of the impulse and at the same time reduce its duration.

Electronic apparatus and control, communication, and power supply systems are especially sensitive to the effects of EMI. In the opinion of U.S. specialists, the detonation of a 10-megaton super-EMI charge at an altitude of 300-400 km above the geographical center of the United States—the state of Nebraska—could disrupt the work of radioelectronic equipment almost throughout the country for long enough to thwart retaliatory measures. The nuclear tests that are continuing across the ocean are aimed both at "refining" super-EMI and at researching methods of protecting the country's own weapons from it. These weapons are intended for the delivery of a first, "counterforce" strike and therefore are destabilizing in nature and force the other side to be warier about U.S. military preparations.

The concept of a "counterforce" strike which obsesses certain military theoreticians across the ocean has prompted them to create nuclear warheads specially intended to destroy specially hardened installations such as ICBM silos and command posts. To this end back in the late seventies the United States began research into creating warheads which can penetrate the ground to a depth of dozens of meters. When a nuclear charge is detonated at such a depth the bulk of the energy goes to form a crater and shock waves, which considerably increases its destructive effect. The detonation of a 200-kiloton penetrating warhead at a depth of 15-20 meters is equivalent in destructive effect to the surface detonation of a 600-kiloton MX warhead. After the signing of the Treaty on the Elimination of Intermediate- and Shorter-Range Missiles the efforts of U.S. specialists switched to the creation of such warheads for ICBM's.

A few years before R. Reagan put forward his "Strategic Defense Initiative," the Livermore Laboratory (California) began work on creating antimissile "weapons of the 21st century"—nuclear-pumped X-ray lasers. These

weapons are intended as the main means for destroying missiles during the boost phase of the flight path, before the warheads separate. They are to thwart a retaliatory attack by enemy missiles, and they have now been given an imposing name—"salvo-fire weapons."

Along with work on creating third-generation nuclear weapons the United States is also conducting basic research in the sphere of "trans-nuclear" combat systems. This includes the creation of weapons based on antimatter, antigravity, and various energy fields. The possibility of producing compact charges on the basis of certain isotopes of trans-plutonium elements is being examined.

All this shows that by no means everyone across the ocean is prepared to abandon the attributes of the "cold war" and the policy of confrontation and nuclear deterrence. But the future does not belong to them. The process of disarmament is increasingly gathering strength. The task of all peace-loving forces is to make it irreversible.

#### Experts, Officers Discuss Rocket Forces Role

PM1112142090 Moscow Television Service in Russian  
2230 GMT 17 Nov 90

["Serving the Fatherland" program]

[Excerpts] [Sergey Yurakov, journalist] On 7 October 1941, Academician Yangel, the founder of your ["Yuzhnoye"] association, wrote to his wife: "It is impossible to buy any food in Moscow at the moment. Sugar and sweets have disappeared completely. They are unobtainable even on coupons." If Academician Yangel were alive and writing today, he could use the same words. What is happening? Has time stood still in our country? Or has the war lasted for more than half a century? War against whom?

[Academician V.F. Utkin, general designer, general director of "Yuzhnoye" Science-and-Production Association] I believe that Mikhail Kuzmich [Yangel] would probably use similar words, not exactly the same words, but similar ones. But that does not mean that time has stood still. I believe that the main point does not lie in war but in the social issues which are currently discussed so vehemently and at such depth in the Supreme Soviet.

But since we are on the subject of war, I would like to mention the cold war that was waged between our countries, essentially from 1945 until 1980. It was this cold war which forced us, rocket designers, to concentrate our minds every day, the whole of the time, on how to prevent this cold war from deteriorating into a hot one.

I would like to draw your attention to this poster [depicting U.S. rockets, with relevant dates] which shows how energetically the Americans organized the cold war at the beginning.

Here you can see how we were forced to keep up with all this. I believe that thanks to the fact that the necessary measures were adopted at the time, everything was done to prevent a hot war, a terrible hot war. This is now obvious to everyone.

Here you can see something very characteristic [turns to another wall chart]. Here you can see the increase in the extent of weaponry [boyezaryad]. These are the U.S. ones, and these are ours. You can see that at that time we were still constantly slightly behind. But we managed to keep up.

[Narrator] On 6 August 1945 the Americans dropped an atomic bomb on Hiroshima. The explosion claimed the lives of tens of thousands of civilians.

Meanwhile in our country reconstruction of cities, villages, and enterprises devastated by the war had begun. Peaceful life was resuming. During the first post-World War II years the Americans built strategic bombers and rockets capable of delivering a nuclear strike against our country. This is how the cold war began:

[Caption on screen reads: "Joint Military Planning Committee, Directive No. 432/D, 14 December 1945. 'Using all 196 available atomic bombs, the United States could deal a devastating blow to the industrial sources of USSR military power, which would ultimately prove decisive...'"]

[Narrator] On 29 August 1949 the first experimental nuclear explosion was carried out in the Soviet Union, ending the U.S. monopoly on nuclear weapons.

However, as early as 1 January 1950 the U.S. military command elaborated a plan for a military attack on our country under the code name "Trojan."

The Soviet Government paid serious attention to the development of rocket building from the earliest postwar years. Engines were tested, control systems were created. In 1947 the creation of the Kapustin Yar test site began under the leadership of Lieutenant General of Artillery Voznyuk. A year earlier, at one of the Defense Ministry research institutes a new department was set up which served as the basis for the creation in 1950 of Special Design Bureau No. 1. Sergey Pavlovich Korolev was put in charge of it. The main task of the design bureau was the development of the "R" series ballistic missiles. Apart from Korolev, design teams led by Glushko, (?Filyubin), (?Bormin), and Kuznetsov took part in this work. The joint task which united the test site workers and designers was the creation of missile weapons. Eleven experimental launches were carried out during the development of the R-1 missile. As to their tactical and technical specifications the second series of R-1 missiles were already considerably superior to the V-2 rocket developed in Germany.

In 1953 the Soviet media reported that thermonuclear weapons had been developed and tested successfully.

Soon after, a new U.S. plan for war against our country appeared.

[Video shows map captioned: "'Dropshot' 1 January 1957"]

From the mid-fifties to the early sixties a number of nuclear weapon delivery vehicles were developed in the Soviet Union. They were designed to resolve the country's main defense tasks and end the invulnerability of the territory of potential enemies.

This was achieved for the first time with the R-5M missile systems which were accepted into the arsenal 21 June 1956. The R-7 missile, the first successful launch of which was carried out in August 1957, resolved the main defense task even more reliably. As early as 1960 this missile system was added to the arsenal.

This documentary footage shows R-7 missile tests. As to its class, this missile already ranked among the ICBM's. In this context, the Council of Ministers approved a resolution on creating a Defense Ministry scientific research and test site on the territory of Kazakhstan 12 February 1955. This later became the Baykonur Cosmodrome. After the acceptance of the R-7 missile system into the arsenal, it was deployed in a combat group in a northern part of the country. The Soviet Union also used this missile as the basis for its exploration of near-earth space for peaceful purposes.

[Yurakov] How, in your opinion, has our country's military-strategic position changed of late?

[V.L. Lapygin, general designer, general director of "Avtomatika i Priborostroyeniye" Science-and-Production Association] I believe that the military-political position of our country has become considerably more complicated. A year ago many deputies in our legislature took the view that from the military viewpoint everything was in order in our country, that no one was threatening us, and that it was possible to substantially reduce military expenditure. There were even extreme opinions which called into question the usefulness of maintaining our army as such, and so on and so forth.

The first complication arose with the unification of Germany. As a result, the military and political situation in Europe has grown substantially more complex. As you well know, the GDR... [changes thought] well, the Germans have united and become part of NATO, no less. If, for instance, Germany had taken up a neutral position, separate from NATO, that, in my view, would make for a more tranquil situation in Europe.

Furthermore we are now witnessing the development of events currently under way in the Persian Gulf. It is necessary to mention here that the United States, when it did not like what was happening in Panama, established "order"—it is necessary to use quotation marks here—in that country in a matter of 24 hours. That is to say they carried out an armed attack. We denounced that affair as

aggression. Prior to that there was a similar situation concerning Grenada. But when Iraq did something similar in Kuwait, we denounced it in unison as the aggressor, although we should bear in mind that we have a treaty with Iraq, a treaty of friendship and nonaggression, and, obviously, also other obligations, so to speak. We have to bear in mind that U.S. troops, to put it bluntly, have occupied, have established a grip, on the entire Arabian peninsula, and that the situation taking shape there is extremely complex.

[Yurakov] Is U.S. expenditure in the sphere of strategic missile development being reduced? How are they implementing the relevant programs?

[Lapygin] They are not cutting their expenditure. We know from the press, you yourself know, that apart from the new enhanced-accuracy MX ICBM, they are developing the Midgetman system. They are also developing the Trident-2 ICBM for submarines, and the B-2 bomber, the Stealth bomber, as it is called. That is to say, they are not cutting strategic forces in this respect.

In general, all the cuts in U.S. expenditure that are being claimed by certain ranking officials... do not exist, in my opinion. Take for instance the latest report which I have heard, claiming that the budget submitted by the U.S. Administration has been cut by \$15 billion excluding the expenditure for the Arabian operation. But if you take into consideration that Saudi Arabia guarantees them \$15-20 billion for funding this whole operation, for maintaining these troops, this balances the books, so to speak.

[Yurakov] Why are the Americans not cutting their expenditure on strategic arms, after all the situation in the world is changing, after all there is a thaw?

[Lapygin] You know that their stance remains nonetheless one of negotiating from a position of strength. To compare our doctrines, while ours is a doctrine of defense sufficiency, the U.S. doctrine is a doctrine of looking after their own interests. As for these interests, what they are and where, in what part of the world they are, is known only to themselves. Naturally, these interests can change. At present they have interests in Arabia, tomorrow they may crop up in other parts of the world. Therefore the doctrine to which they adhere is a doctrine which gives them a relatively free hand.

[Yurakov] Our country has adopted the military doctrine of defense sufficiency. Important cuts in missile arms are envisaged. Meanwhile the development of SDI continues in the United States. These circumstances make enhanced demands on the quality of missile arms. Enhanced quality in turn demands considerable expenditure. Will it be possible, nonetheless, to cut appropriations for missile weapons in 1991 and subsequent years?

[Army General Yu.P. Maksimov, commander in chief, Strategic Rocket Forces] You are absolutely right, given

the quantitative reduction in strategic arms, the implementation of the task entrusted to the Rocket Forces is possible only by means of enhancing the qualitative parameters of the arms. Furthermore, the implementation of the SDI program by the Americans cannot be ruled out. Incidentally, work on it continues according to statements made at different levels. Naturally, the deployment of a large-scale ABM defense system within the framework of the implementation of this program could seriously undermine strategic stability in the world, and disrupt military strategic parity in favor of the United States. For this reason we envisage perfecting... [brief break in transmission or tape] so as to keep abreast of contemporary requirements and retain the possibility of discharging the tasks entrusted to the Rocket Forces also under these conditions. Naturally, this requires a certain amount of expenditure. Given the cuts in USSR defense appropriations we have envisaged conducting research work to improve weaponry to the minimum level, the level necessary to improve arms so that our Rocket Forces are up to the tasks facing them.

I can now say here that our preparations for the 50-percent cut and the cut in defense appropriations as a whole have already considerably affected our plans to improve arms and we have already made considerable cuts. But you must bear in mind that there can only be cuts in appropriations and expenditure to a certain level, beyond which, if there are any further cuts, this will damage our country's security. That must not happen under any circumstances.

[Yurakov] What danger lies in store for our country if there are imprudent cuts in funding and research work on missiles?

[Utkin] First, I would like to say that in all our developments we always pay exceptionally great attention to ensuring that we can produce good, effective machines for little cash. This is, as it were, the foundation for design bureaus and workers, and we will continue this in the future. There is also very great danger. It will be very dangerous if we lose equilibrium in the course of this cut in systems. We must have enough systems for the new thinking and make very effective use of them. We must not lag behind here.

[Yurakov] The country's defense complex—like your association, moreover—is scattered throughout the country. How can we build the country's defense in conditions where the republics are declaring sovereignty and given certain initiatives, such as, say, the Leningrad Soviet's initiative to amalgamate defense enterprises outside the city?

[Utkin] This is my answer. It is simply impossible to organize defense when we are tearing the country apart, because the creation of complexes like the missile complex is work for the whole country. The whole country creates them both scientifically and technically, as a complete unit, the whole country alone. This cannot be done separately.

By the way, this by no means prevents each union republic from becoming autonomous and resolving its own questions. But everyone must tackle defense together. First, this will be far cheaper. Second, a reduction in nuclear potential can be organized. Lastly, we can therefore move on to something which we all dream of achieving—a nuclear-free world. You will not resolve that separately under any circumstances. But the main thing is that every republic in our country also has a great deal of scientific potential. It is only by putting it together that, rather than falling behind, but can keep pace with scientific and technical progress. We must all strive to achieve this.

[Yurakov] The Rocket Forces were set up by all the republics, but what is to be done if some of them want to secede from the Union and detach their part of the property, their part of the Rocket Forces, 100 nuclear missiles?

[Colonel A.V. Bal] The Rocket Forces are weapons for collective use, for collective defense. They are designed to defend vast territories and they can strike vast territories. If we split up these formidable weapons among various departments, etc., we deprive the Rocket Forces of their might. We deprive them of unity but we also weaken these Rocket Forces of ours against our enemy, against our potential adversary, who possesses these same nuclear weapons. That is why we are, of course, against private armies, we favor a united, strong army.

[Yurakov] How do you assess the domestic political situation within the country?

[Guards Major A.V. Lambin] Here in principle everyone has to form his own opinion, from his own standpoint. The situation is nonetheless very complex. Look, all this dissension has begun within our union. Everyone pulls their own way, everyone wants to secede, you know. There are, of course, demands for, say, economic independence and political independence. But the point is that due to historical development people in our country are not necessarily living where they were born; there has been a very great deal of migration. Therefore it's very difficult to say that these people live here, those people live there, this is their republic, this is someone else's republic.

[Yurakov] Are the emergent processes where economic ties between the republics are being severed disrupting Soviet missile building and threatening the very existence of the Strategic Forces?

[Lapygin] I would say that it is not only a question of missile building, the point is that there should be a Soviet Union, perhaps, a federation and there should be republics. There should be laws, which should be implemented at all levels, from top to bottom. Without this discipline and without this order there can be no serious discussion of policy or the state structure, much less of defense sectors of industry, in particular missile building. The appropriate order should be established,

based on democracy, glasnost, respect for the law above all, implementation of the law, above all—the laws that we adopt at all levels.

[Yurakov] As a general designer of strategic rockets and as a member of the USSR Supreme Soviet Committee for Defense and State Security Questions, you are acquainted with the military doctrine of reasonable defense sufficiency, what is the essence of it?

[Utkin] Your question is very multifaceted. I can, of course, in this short time only say briefly that it resides in the fact that neither side must imagine that it will go unpunished after carrying out a strike.

[Narrator] The use of liquid oxygen as an oxidizing agent on the first Soviet missiles made it impossible to ensure combat readiness and the required performance characteristics. In this connection the "Yuzhnoye" special design bureau and an experimental production unit, the "Yuzhnyi" machine building plant, were set up in 1954 in the city of Dnepropetrovsk at an automobile plant and a series design bureau. The main task was to develop and manufacture highly effective live [boyevyye] ballistic missiles capable of remaining for a long time in a state of constant combat readiness. The transition to high-boiling fuel components also made it possible to guarantee supreme combat readiness and enable the missiles to remain on standby for a long time. The second feature of the new generation of missiles was the transition to an independent guidance system. A unique testing base was set up to flight-test the new missiles, where missile stages were tested. The "Yuzhnoye" special design bureau was headed by the 43-year-old chief designer, Mikhail Kuzmich Yangel. In conjunction with the people developing the system of missile complex components the design bureau's young collective successfully coped with its task and created the first live strategic missile, using high-boiling components, with a range of more than 2,000 km. The development and beginning of deployment of these missiles were ensured by the adoption 17 December 1959 of the decision to form the Strategic Rocket Forces as a separate branch of the troops.

While work was being completed on the first strategic missile, work began to develop on an intercontinental missile. The increased accuracy of U.S. missiles necessitated the development of new missiles and the construction of hardened launch silos.

The "Yuzhnoye" design bureau collective developed the first ICBM in parallel. It deprived the United States of the monopoly on possession of nuclear delivery vehicles. The further improvement of ICBM's necessitated the development of multiple reentry vehicles, orbital reentry vehicles, and radiotechnical defense mechanisms to surmount ABM defense. The introduction of the designers' technical solutions required the "Yuzhnyi" machine building plant to master new technologies. Thus, for the first time in world machine building a missile was launched mortar-style from a transportable launch canister. The increase in accuracy and the development of

multiple independently targetable reentry vehicles [MIRV's] necessitated the use of onboard mini-computers. The present-day capabilities of ICBM's are such that a retaliatory launch can be made even during a nuclear attack. This is a necessary characteristic in conditions of a defensive doctrine.

Our country also has to improve missile weapons in order to counter the threat linked with the deployment in the United States of the highly accurate MX ICBM's.

[Video caption reads: "Existing missile complexes were not only developed at the 'Yuzhnoye' Science-and-Production Association, but also at design bureaus headed by Academicians V.N. Chelomey and A.D. Nadradze"]

[Yurakov] What kind of combat vehicle is this?

[Doctor of Military Sciences Colonel General A.A. Ryazhskikh, deputy commander in chief, Strategic Rocket Forces] It is a new strategic missile complex making its first appearance in our parade. Under our defensive doctrine, it is a purely defensive complex. In connection with the 50-percent cut in strategic nuclear forces when every launcher, every warhead plays a large role, this complex performs this defensive task in a supremely reliable manner.

Of course, only high-class, high-level specialists could develop this complex. By the way, we had to train specialists, instruct them, provide them with vocational training in order to develop this complex. I must say that the standard of our military specialists fully accords with the development of this complex. [passage Omitted]

[Yurakov] What is your attitude to the upcoming accord on the reduction of strategic offensive arms?

[Lapygin] I have stated before that, unfortunately, we are making cuts in the combat arms where we look most up to date. This applies to the Strategic Rocket Forces, and also conventional arms forces—that is tanks, our (?tactical) artillery pieces, and also rockets... In my opinion they also look sufficiently advanced.

Other arms of the service, and in particular the Navy, are a different matter. The Navy is only just beginning to be mentioned, although the Americans are still a long way off understanding that it is necessary to cut back the Navy. This also applies to the Air Force and other branches. Although, I understand, negotiations have already gone beyond the original two categories, and further steps are being planned to introduce cuts in other areas.

Unfortunately, during the first stage, it seems to me—or rather it is not just an impression... I even wrote about this problem in an article in ZA RUBEZHOM... a situation has taken shape that even the Americans, an edition of THE WASHINGTON POST, I think it was in April, carried an article to this effect. They worked out at that time what they had gained from these [arms control]

negotiations. The conclusion was: Not only have we not reduced our nuclear might, we have doubled it, among other things.

[Yurakov] Under the upcoming accord on the reduction of strategic arms, our country will have to spend large sums of money on the conversion to useful purposes [utilizatsiya] of highly (?toxic) rocket propellant, nuclear warheads, and so forth. Where is this money to come from? It seems that this treaty is not entirely advantageous for our country in economic terms.

[Utkin] I believe above all that it is necessary to spend this money. It is necessary to seek to lower the nuclear potential. It is true that this will cost money. Where is this money to come from? Well, it is a difficult process. The process of the arms build-down is just as difficult as the process of the arms buildup was. It is not a simple process, it is a difficult process, but we must go through with it. It is necessary to lower the nuclear potential. That is one solution. There is also another solution of which we are aware. It is necessary to agree on the utilization for the benefit of the national economy of missiles which are to be removed from alert duty.

We have a launch vehicle which was used for the first time 16 March many years ago. It initiated the "Kosmos" series. It was a combat system originally. It is necessary now to agree on utilizing former combat systems to launch satellites. This will be advantageous for the entire human race. It is necessary to do this, not to be afraid and to proceed with the implementation of this task. It will be beneficial. We may arrive at very interesting findings. For instance, launching the "Arcad" [Arctic auroral density] satellites in cooperation with France, we have obtained information which shows that it is possible to forecast earthquakes with the help of data obtained during studies of the magnetosphere and ionosphere. This makes it possible for us to advance in this direction and, if we manage to reach agreement under the treaty, we will utilize our weapon systems for this purpose. This is the second solution and it is most suitable. I believe that we will come to an agreement. We simply must. This will be a human solution.

[Yurakov] How much foreign currency could the country earn from the utilization of rockets subject to reduction under the treaty to launch commercial satellites?

[Utkin] I think that this will depend primarily on the number of rockets which we agree to utilize. But it could be anything up to R5 billion. This is a lot of money. However, there are other important uses. There is no need to translate everything into money. For instance, finding a way to send rescue facilities to a sinking ship, or a submarine... Not everything can be expressed in terms of money. These systems make it possible to solve these tasks. I estimate the potential, depending on numbers, at up to R5 billion.

[Yurakov] What are the obstacles in the path of the utilization of rockets subject to reduction under the treaty for commercial launches?

[Utkin] There are no fundamental obstacles. It is necessary to reach an accord. What does reaching an accord mean? First, it is necessary to find the initial money necessary to launch this mechanism. Second, it is necessary to define in the treaty which of the systems that are to be reduced can be utilized. That is to say an accord must be reached. Third, and probably most important, it is necessary to lift the ban on launching other countries' satellites from the territory of our country. We are prepared to guarantee that we will not look under any seal. We have our own scientific achievements. We are prepared to share them. The time will come when we will discuss them jointly and share them. It is simply necessary to lift this ban. This will help to resolve many tasks.

[Narrator] Experience gained in the course of the destruction of intermediate-range missiles has shown that missile arms cuts are not a simple nor a cheap matter.

The upcoming 50-percent cuts in strategic offensive arms call for the destruction of missiles with a much bigger launch weight and dimensions. Therefore the search for optimum methods of the elimination of missiles is becoming a topical problem.

[Yurakov] During your time, and thanks also to your efforts, strategic parity between the USSR and the United States was achieved. Under the upcoming treaty on the reduction of strategic forces part of the rockets will have to be destroyed. Are you, as a designer, not feeling sad at the fate of your rockets?

[Utkin] I believe that they have fulfilled their main task. The task which was entrusted to us, the task of preventing the cold war from deteriorating into a hot war, as I have said before. This task they have fulfilled. It is also necessary to ensure that the cuts are balanced and that they go deeper and deeper. This is another task which these rockets must resolve. Their quality must be such that it facilitates a reduction, a lowering to the lowest permissible level. Most importantly, it is necessary to reach an agreement on utilizing them for useful purposes. Therefore, in reply to your question, I am proud of these rockets which have ensured the defense of the country, which have fulfilled their task, and I hope that they will help to resolve many more peaceful tasks benefiting mankind.

[Yurakov] Are you not a little sad all the same?

[Utkin] No, I would not put it this way. I am not sad. Thanks to the platform which I have described to you, I believe that they will serve useful tasks. We have peace. There is no war. About what is there to be sad? It is necessary to seek to ensure that there is no threat hanging over us for many years to come. This means great happiness for me as a general designer.

[Yurakov] What, in your opinion, is the impact of the conversion which is under way in the country, on Soviet rocket building?

[Bal] The idea of the creation of rocket technology has attracted its enthusiasts. When enterprises are told to produce meat grinding machines instead of rockets, this is bound to discourage skilled cadres. We are worried about our intake in the future, and about how our design bureaus will cope with their tasks in the future.

[Yurakov] Are you satisfied with the progress of conversion in our country?

[Utkin] No, I am not. It has proved to be an extremely complex process. I believe that at the beginning it was viewed in rather simplistic terms. I am dissatisfied primarily because we are told that it is necessary to transfer our entire scientific and technical potential to the national economy. That is to say, we must give everything that we have accumulated to the national economy so that the introduction of new developments produces the most advantageous returns there.

What we need is several major state programs, which must be funded, and for which key enterprises must be made responsible, responsible for delivering specific systems, just as we do, to clients. I will give you an example. It would be very advantageous, in particular for our country, to have an ecologically clean power generation industry. By the year 2000 some countries, Britain for instance, are planning to cover up to 25 percent of their energy requirement from such sources. The corresponding percentage in other countries totals 10 to 15 percent. In our country, according to our estimates it will total 0.03 percent. We need this kind of energy in the north and in many other places.

We built this first 100-250 kilowatt installation in Pavlograd. [video shows wind generator] It is undergoing tests and is attracting much interest. In this way we are retaining our production facilities and our entire skilled staff and specialists. We are making use of what we used on our weapon systems. This sort of conversion is useful.

I would also like to draw your attention to another matter. If, by creating launch vehicles on the basis of weapons systems we have made correct use of conversion in the original sense of the word, we have now moved a step further and built the "Zenit" launcher which uses ecologically clean components and compares favorably with launchers built in other countries. It has therefore generated great interest in Australia. We are currently conducting negotiations with the Australians with a view to launching our "Zenit" launch vehicle from their international space center. Allow me to reiterate that the rocket has many advantages thanks to its ecologically clean components, thanks to its super power engineering which means payloads of up to 12 tonnes in our latitudes, that is to say per standard atmosphere [na standartnuyu atmosferu], standard specifications. Its launch is fully automated. During the launch, during fueling and preparation, no one is present, it is a fully automated process. The launcher also has many other qualities. The area allocated for the launch pad need be no bigger than what you see here [video shows aerial

view]. The configuration of the system is very good. In short, it has generated great interest.

Thanks to the development of such rockets it is possible to earn money, and consequently it is possible to buy consumer goods. This is a solution which must be utilized. The big companies must carefully work out what is advantageous for the country. Only where it is advantageous—and this is the essence of the market system—efforts must be made to earn money.

[Yurakov] Tell me, how are the cuts in the appropriations for rocket building and our economy's progress toward the market compatible?

[O.N. Shishkin, USSR minister of general machine building] Everyone is familiar with our country's policy today, and the strategic arms cuts were an initiative put forward by our country. The program for 50-percent cuts in strategic arms, which is well-known throughout the world and which is to be agreed and approved in the next few months, will enable the Soviet Union on the one hand to cut back strategic arms, and subsequently, during the transition to the market to free certain resources which will make it possible for defense sector industries to find the money necessary for conversion without losing strategic parity.

The situation today is such that it is impossible to have two different parameters, so to speak, one for the defense industry and one for the market, for saturating the market. You cannot have defense industry operating according to one scheme and a market economy operating according to another scheme. In both cases economic incentives and the country's economic system must apply.

[Yurakov] Yes, but the defense industry is the most nonmarket sector of our economy.

[Shishkin] But it is a sector which is essential for the existence of any independent state. Therefore the state sector and the state economy, extending to the defense sector, must be able to rely on its operating according to the same schemes under which the entire economy of the whole country is operating.

[Yurakov] Under the conditions of new political thinking positive changes have taken place in Soviet-U.S. relations, and this includes the military sphere. Our countries have come a long way in drafting the strategic arms reduction accord. In this context, how do you assess the role, place, and prospects of the Rocket Forces in maintaining nuclear strategic parity?

[Maksimov] There is no more important task at the moment than the prevention of nuclear war. The main objective of our military doctrine is precisely to prevent war. This is to some extent facilitated by the course pursued by our state toward reduction of military confrontation and preservation of military strategic parity at the lowest possible level. This is particularly important now, in the conditions of the economic difficulties which



our country is experiencing, in conditions of the need to cut back defense appropriations.

At the same time, the reduction and elimination of nuclear weapons must take place on a reciprocal basis, ensuring the preservation of strategic parity at every stage of the reduction process without detriment to the sides' security. That is to say, strategic arms cuts are a two-way street, and this is how it must be. (Lowering our guard) unilaterally could hardly be justified, especially in view of the fact that both in the United States and in a number of other Western countries strategic arms development programs are being consistently and persistently implemented. They remain committed to the concept of nuclear deterrence. Although international tension has somewhat subsided as a result of the practical implementation of the principles of new political thinking, there are as yet no guarantees that the positive changes in the world will prevail. Nor has the military threat to our country been eliminated.

In these conditions reliable defense of our country has been and remains one of the most important tasks for our people who lived through the grim war with fascism.

Against the backdrop of unilateral and treaty reductions of armed forces and conventional arms and important changes in our country's strategic position, the role of the Strategic Rocket Forces as the basis of the strategic nuclear forces has not only not diminished but has increased of late in questions of both deterrence and prevention of war.

At the same time the defensive nature of the military doctrine is making even tougher demands on the rocket forces. They must possess reliable stability, adequate combat efficiency, and also the necessary potential for retaliatory action so as to scotch the temptation of any aggressor to unleash a war against our country.

Availing myself of this opportunity, I would like to congratulate television viewers, all servicemen of the Rocket Forces, veterans, and rocket designers and builders on Rocket Forces and Artillery Day. I would like to say that the rocket men who are currently mounting the guard are continuing the traditions in worthy fashion, are augmenting the combat readiness and might of our Rocket Forces, and are vigilantly guarding the socialist gains.

Allow me, comrade television viewers, comrade scientists, technicians, and workers, creators of rocket technology and arms, and Rocket Forces and Artillery servicemen to cordially congratulate you on your holiday, Rocket Forces and Artillery Day, and to wish you good health and further success in your work and service, happiness in your life, and all the very best!

### Observer Discusses Value of Strategic Arms Treaty

LD2712220990 Moscow TASS in English 2104 GMT  
27 Dec 90

[By TASS military observer Vladimir Chernyshev]

[Text] Moscow, December 27 (TASS)—Soviet-American talks on strategic offensive weapons have been held since 1985 and are now nearing completion. It is possible that the first strategic arms reduction treaty will be ready in time for the new Soviet-American summit.

It is already possible to assess this document, the first strategic agreement in the period of restructuring international relations. It should be stressed right from the start that Soviet and American experts are far from uniform in their attitude to the treaty. Some say that talks cannot ensure radical changes in the nuclear arsenals of the countries and hence fail to accomplish tasks set for them.

Of course, agreement reached so far is not optimal, in so far as not all planned objectives have been reached. The arms levels the treaty permits are still fairly high and do not eliminate the threat of a nuclear war completely.

Nevertheless, the prospective treaty will be a landmark on the road towards nuclear disarmament. Whereas the previous agreements in this field mainly restricted strategic offensive weapons, the new one intends to radically and effectively reduce them. In combination with the intermediate nuclear force treaty, the implementation of which has entered its final phase, the new treaty will become a factor reducing the nuclear threat.

It is also of extreme importance that although the treaty of the strategic arms reduction will not cut the Soviet and American nuclear potentials radically enough, it introduces limits and restricts the possibility of uncontrolled quantitative build-up of strategic arms and makes interrelations of the sides in the strategic field more predictable.

The treaty ensures a balance of interests: Neither side will get decisive advantages which could become the source of destabilisation in the field of strategic offensive weapons.

Imposing strict limits on nuclear arsenals and subjecting them to close mutual supervision, the treaty becomes a major stabilising factor, impossible to overestimate. The interests of the United States and the Soviet Union undoubtedly coincide in the desire to strengthen strategic stability.

Another important point should be stressed. Both sides are active members of the treaty of the non-proliferation of nuclear weapons and, under this treaty, are obliged to strive for effective measures to end the nuclear arms race.



The conclusion of the strategic arms reduction treaty would mark a step towards the fulfillment of these obligations. The success in reducing both Soviet and American strategic offensive weapons is of extreme importance for the effective restriction of the nuclear weapon proliferation.

Only by setting an example for others to follow, the Soviet Union and the United States can strengthen their confidence in the nuclear disarmament process and persuade others to abstain from acquiring nuclear weapons.

### **Chernyshev on Prospects for 'More Radical Talks'**

*LD2812142490 Moscow TASS in English  
1406 GMT 28 Dec 90*

[By TASS military observer Vladimir Chernyshev]

[Text] Moscow, December 28 (TASS)—The treaty reducing and limiting strategic offensive weapons, the preparation of which is being completed in Geneva, opens up prospects for more radical talks.

The joint statement signed during the Soviet-U.S. summit in Washington in June 1990 reads that the strategic offensive weapons treaty will be followed by talks on nuclear and space weapons and increasing strategic stability.

It would be expedient to radically cut and strictly limit most destabilising and offensive types of strategic weapons and increase the viability of means for retaliatory strikes.

With this end, a range of measures should be discussed, including reducing the ratio between the number of charges and the number of their carriers. In the future, we should seriously consider a complete ban on cruise missiles and ballistic missiles with fractioned and independently targetable warheads.

The negotiating process must advance to a new level, passing from parameters that determine the sides' forces to quantitative-qualitative parameters. The United States has pursued qualitative superiority in arms, and this could set the balance in favour of Washington.

How to obstruct the most destabilising direction in the development of strategic technologies and set strict rules for modernising and replacing weapons? We should limit a qualitative advance in strategic weapons, the creation of new types and the emergence of new arms race spheres.

All kinds of strategic weapons should be treated equally. There are no grounds for weakening control and limits for sea-based ballistic and cruise missiles. Fairer rules should be worked out for various types of weapons, giving advantages to neither of the sides, when a carrier is considered to have less charges than it really has.

We can hardly speak about disarmament and increasing stability, if a new channel opens up for an arms race in space. There should be no arms in space. The next stage of talks should proceed from the existing relationship between strategic offensive and defensive weapons and press for observance of the ABM Treaty banning the creation of large-scale anti-missile systems, a pre-condition for signing the next agreement.

It would be expedient during the talks to discuss when other nuclear states would join the Soviet Union and the United States in reducing and limiting nuclear weapons. So far, reductions in Soviet and U.S. nuclear arsenals have been accompanied by growth in other countries' nuclear potentials.

The strategic offensive weapons treaty should be followed by talks to increase mutual trust, eliminate reasons for making a first nuclear strike, lessen the danger of a nuclear war and increase strategic stability.

## **CONVENTIONAL FORCES IN EUROPE**

### **Karpov, Kuklev Interviewed on Paris Meeting**

#### **Karpov on CSCE Summit**

*91WC0029A Moscow PRAVITELSTVENNY  
VESTNIK in Russian No 48, Nov 90 p 14*

[Interviews with Viktor Pavlovich Karpov, deputy USSR foreign minister, by correspondent Yu. Popov; place and date not given: "We Have Signed Off on the Past"]

[Text] [Popov] Viktor Pavlovich, how do you evaluate the results of the Paris meeting?

[Karpov] The meeting in Paris within the framework of the all-European process was a unique phenomenon in Europe's postwar history. It was conducted on the initiative of the Soviet Union ahead, as it were, of the scheduled convening of all-European conferences initiated in 1975 in Helsinki. The next conference had been scheduled for 1992. But it was anticipated by a special meeting timed to coincide with the completion of the elaboration of the treaty on a reduction in armed forces on the continent, the signing of the joint declaration of 22 countries, and the Paris Charter for a New Europe. Each of these documents is unique. And all together they inaugurate a new stage in the development of the system of the all-European conference.

[Popov] What may be highlighted as most important in the results of the Paris meeting?

[Karpov] I would prefer to begin with the declaration. It puts the problem of relations between the two military alliances on an entirely new footing. We all know that the all-European process that began in 1975 preserved to a considerable extent that same confrontation of NATO

and the Warsaw Pact. It has now been proclaimed that their participants are no longer enemies.

The treaty on armed forces, on the other hand, constitutes the material basis, as it were, for the new course in relations between members of both blocs. The first Vienna negotiations on a reduction in armed forces in central Europe, which lasted 10 years, led to nothing. Against this background the dialogue begun in Vienna in March 1989, produced truly striking results: 22 states were able to agree on a reduction in armed forces that no one could have foreseen 18 months ago.

What is the thrust of the treaty, which may provisionally be called "Vienna 1?" Its main purpose is a start on a reorganization of the structure of the armed forces of both alliances on a defensive basis. This is connected also with a revision of the military doctrines of NATO and the Warsaw Pact. Their representatives have already discussed questions on the content of the doctrines and ascertained the directions in which they should develop in order for a purely defensive nature to be imparted to them.

[Popov] What lies ahead?

[Karpov] The problem of deeper cuts remains urgent. There is already agreement on a continuation of the Vienna negotiations on arms reductions to solve the problems that we inherited from the "Vienna 1" negotiations. This is why the period up to 1992, when the next all-European conference will assemble, has provisionally been called "Vienna 1A". Negotiations are under way in parallel on confidence-building measures within the framework of the 34 states.

All this will make it possible to adopt new confidence-building and security measures in Europe. In other words, it will be necessary to formulate the mandate of future negotiations for the next Helsinki meeting. And, what is more, negotiations no longer between two blocs, but among all participants in the all-European process—with regard for the national interests of each of them, that is, outside of a bloc framework. This will afford an opportunity for taking a broader view of questions of an even more radical reduction in troops and arms (by a further 50 percent within a framework of all Europe, possibly) and the creation of new institutions of European security: imparting regularity to the meetings of heads of state and government and foreign ministers and creating in Vienna a conflict-prevention center with a rapid communications system encompassing all of Europe, in Prague, the secretariat of the all-European process, which will prepare the material for foreign minister meetings, in Warsaw, a free elections bureau, inasmuch as the Charter imbibes both confidence-building measures and humanitarian spheres, economic cooperation, human rights and so forth.

As a result, new ways to the economic, legal, and political integration of Europe will be opened. We are experiencing a great need to establish contacts with West European institutions—the EC, the Council of Europe,

and others. The Paris Charter speaks of the establishment of a parliamentary assembly—an integrated body incorporating all participants in the CSCE and permitting the development of cooperation of the legislators of these states.

[Popov] Viktor Pavlovich, have we not sold too cheaply in the course of the negotiations?

[Karpov] Truly, our reduction is the most substantial. But if we have resolved to reduce offensive arms on both sides to the lowest possible and at the same time equal level, whoever has more, consequently, will reduce more.

[Popov] What might the treaty's influence on a solution of our domestic problems be?

[Karpov] In connection with the limitation on the levels of arms, the need for them declines sharply. For this reason manufacture of them will decline, and it would be expedient to reorient the spare production capacity toward consumer goods. There will be a diminution in the numbers of army personnel, and these are high-proficiency rated specialists. They will replenish the ranks of tractor manufacturers, repairmen, and operators of combines and other intricate technology.

Of course, the destruction of a vast quantity of arms and the organization of an inspection and monitoring mechanism will require considerable expenditure. But subsequently, the realization of the treaty in full will have a pronounced effect on both the financial and economic position of our country.

I would like to further mention the importance of the change in the overall international climate that will be created as a result of realizing the treaty and the Charter. After all, new opportunities for our cooperation with Western Europe and the United States and Canada in the economic sphere, particularly in such science-intensive sectors as electronics and the like, will open up. An entirely different situation is now emerging.

Signs of these changes are already visible to all. In fact, it would seem that the Western countries could have availed themselves of the situation that has come about in the USSR to cause it even greater harm in the economy, imposing on us a blockade, boycotts, embargoes, and so forth. However, quite the opposite is happening: Our adversaries of yesterday are expressing an interest in the preservation of an integral, united Soviet state, and our reforms are meeting among them with understanding and support. The task of integration of the Soviet in the world economy is becoming realistic.

[Popov] Could you not briefly describe the "intrigues" behind the preparation of the treaty and the other documents and who took part in them?

[Karpov] We managed, as I have said, to formulate the treaty within a very compressed timeframe—in a matter of 18 months. This required immense effort on the part of the Soviet delegation in Vienna, in which highly skilled advisers and experts were involved, and also of

those in Moscow supporting its activity. They were involved in the elaboration of the other documents also. We have an interdepartmental system for coordinating efforts and harmonizing questions connected with the negotiations in both Vienna and Geneva. Representatives of the USSR Defense Council and Defense Ministry, the KGB, the USSR Council of Ministers State Commission for Military-Industrial Matters, the USSR Foreign Ministry, and other departments have been enlisted. The most important problems are studied by operational interdepartmental groups.

It is complex work. After all, the process involved the harmonization of the opinions and interests not of one but many states. They had to be interfaced. So the treaty was prepared by thousands of people and was the fruit of collective labor. M.S. Gorbachev's meetings with Western figures, top-level meetings particularly, were the engine.

#### **Kuklev on Cuts in Army**

91WC0029A Moscow PRAVITELSTVENNY  
VESTNIK in Russian No 48, Nov 90 p 14

[Interviews with Major General Vladimir Aleksandrovich Kuklev, deputy chief of a USSR Armed Forces General Staff directorate, by correspondent Yu. Popov; place and date not given: "Not Enemies Henceforward—Partners"]

[Text] [Popov] Vladimir Aleksandrovich, many people believe that the military are always unhappy when it is a question of cuts in the Army. As a professional military man, are you distressed at the conclusion of the treaty?

[Kuklev] You are right, it is usually thought that the military are unconditional supporters of the stockpiling of arms and that their slogan is: The more, the better. Yes, the military's mission is providing for the country's defense capability and its defense. But in what way? The answers here may vary. This is sometimes done with the aid of a stockpiling of arms. However, relations between the leading states of the world currently are assuming a nature that affords a new opportunity for the maintenance of the country's sure defense capability by way of negotiations on a limitation and, if possible, a reduction in armed forces also. This is all the more true in our time, when we have agreed that the Warsaw Pact and NATO are no longer enemies.

From this it is understandable why we military men also are making a positive evaluation of the treaty and see it as a step geared to assurance of our security. That I, a professional and specialist, may not care for certain aspects of it is another matter. But this is natural since any treaty is a compromise.

[Popov] What was the reasoning behind the "ceilings" on the quantity of conventional arms and equipment and how were they determined?

[Kuklev] You know that we have agreed to let each group of states in Europe have 20,000 tanks, 30,000 armored combat vehicles, 20,000 pieces of artillery, 6,800 combat aircraft and 2,000 assault helicopters. These "ceilings" take account also of both a quantity of existing arms and defense requirements, since each country has its own opinion on how much in the way of its armament it needs for security under the terms of the treaty. Each group taking part in the negotiations had, therefore, its own discussion of the "ceilings" of each state. Sometimes agreement was reached easily, at times difficult debate flared up. That is, determination of the levels was a product of prudent compromise.

[Popov] You believe, consequently, that the treaty will not in any way harm our security?

[Kuklev] Some people are concerned about the disarmament process that has begun. Why? We are accustomed to a more traditional mode of defense against an external danger: the path of arms stockpiling. It is the most comprehensible and familiar. Nor does history have any precedents of such broad-based arms-reduction actions.

As a rule, arms limitation negotiations have been of a confidential nature. But the specialists are, of course, well aware of all the niceties and are carefully weighing each provision of the accords. Not to mention the fact that the leadership of the General Staff and the USSR Defense Ministry has gone over each figure repeatedly. Research institutions, representatives of the industry's defense sectors, employees of the USSR Council of Ministers and USSR Foreign Ministry—in a word, a wide range of professionally trained specialists—have been enlisted here. And they all had just one primary concern: how to guarantee the country's sure defenses given this arms level or the other.

It may be declared with every justification that, given realization of the treaty, our security will be ensured fully and that the established levels correspond to the requirements of our defensive doctrine and the principle of defensive sufficiency.

[Popov] Can we not, following such a large reduction in arms on both sides, dot the "i's" and consider the negotiations complete?

[Kuklev] No, the issue cannot be put in this way. We reached agreement with the NATO countries that negotiations would be conducted on tactical nuclear weapons in Europe. The USSR also supports the elimination of the imbalances in naval forces.

The point being that the NATO countries had constantly voiced concern about asymmetries taking shape on land in favor of the Warsaw Pact. The present treaty eliminates them. But they persist at sea. The United States and other Western countries say that negotiations on naval forces and the elimination of arms are inappropriate here because the NATO countries are situated on different continents and it is essential, allegedly, to guard sea lanes. But the naval forces of this alliance have

considerable potential also for launching attacks against on-shore targets and could be seen as part of an assault grouping for offensive, not protective, operations. So they must necessarily be limited and reduced.

[Popov] What will be the fate of the people who fall victim to the cuts and what will happen to the equipment condemned to be destroyed?

[Kuklev] We have no intention of destroying the military equipment in toto. Some tanks and armored vehicles (refitted, naturally) may be adapted for economic needs. For example, according to the treaty, we may use for peaceful purposes 750 tanks and 3,000 armored combat vehicles located on the country's European territory. There have already been applications from various organizations and departments, that would like to take a considerable number of modified tanks and armored transport vehicles. Plans for a fire truck for extinguishing forest fires have already been drawn up for the T-55 tank. A pump that shoots a foaming liquid over a very great distance or an extendable jib longer than the regular one may be mounted on them. Mobile tracked cranes with a powerful jib and hoisting capacity may be built. Finally, good heavy scrapers and bulldozers may be made out of tanks.

Many people are being released, and this is a difficult problem not only for us but for any state. A 500,000-man reduction in the size of the Army, which we announced at the end of 1988, is now under way. Much has been said about this process: problems of housing, vocational reorientation, and a multitude of others are arising. And tackling such a task is simply beyond the capacity of our ministry alone.

On the other hand, a sizable group of highly educated workers could be entering the national economy.

It will be necessary, evidently, to overcome difficulties involving conversion also. Understandably, capital investments for its restructuring also will be required. There are no dividends without any outlays. But there will undoubtedly be such.

[Popov] How will the arms be eliminated—burned, buried, demolished?

[Kuklev] There are many methods. Tanks that cannot be refitted, for example, may be destroyed: broken up into parts or blown up, compacted or smashed by a heavy steel ball. The West's representatives even proposed burying the equipment, incidentally. But they subsequently deemed this inexpedient. After all, the purpose of the entire procedure is to exclude the possibility of this type of weapon or the other being restored. And the supply of metal left over may be used as one sees fit: shipped for remelting, say.

### Yazov Says Army's 500,000-Man Cut Completed

LD3012125290 Moscow World Service in English  
1200 GMT 30 Dec 90

[Text] The Soviet Union has in fact completed its unilateral 500,000 reduction of armed forces, Defense Minister Dmitriy Yazov has said in a TASS interview.

Troop withdrawal from a number of countries continues on schedule. At the same time, the minister stressed, the might and combat ability of the Army and Navy are maintained at a level ensuring the prevention of war and a guaranteed repulsion of aggression.

Dmitriy Yazov also revealed plans to do everything to resolve the social problems of servicemen. He said about 177,000 officers' families have no apartments.

### Vasilyev Answers Reader's Criticism on CFE Treaty

PM0101120591 Moscow PRAVDA in Russian  
30 Dec 90 Second Edition p 6

[Article by own political observer Gennadiy Vasilyev under the "Observer to Reader" rubric: "Behind the Treaty"—first two paragraphs are reader's letter]

[Text] "After reading the Treaty on Reducing Conventional Armaments in Europe, published by you, I think that it was concluded to our country's detriment. The treaty was concluded between groups of states belonging to NATO and the Warsaw Pact, but the Warsaw Pact effectively exists on paper only, as the countries belonging to that organization will be leaving it, if not today, then tomorrow. Therefore the number of USSR armaments should be equal to the number of NATO armaments. I would also note that NATO is planning a qualitative rearming of its forces, which actually means a continuation of the arms race.

"V. Kazakov, Irkutsk."

Indeed if a complete disintegration of the Warsaw Pact armed organization does take place, there will be a mismatch produced between the levels of conventional arms we have and those in the West—and not to our advantage. In terms of tanks, for example, the ceiling for NATO will be 20,000, for the USSR (without the other Warsaw Pact countries) 13,300; in terms of combat armored vehicles 30,000 and 20,000 respectively... and so forth. This happened, I assume, because when it was decided to set identical levels for the two military-political alliances—and this process took quite a few years—no one could foresee the changes which have recently occurred in East Europe. So that at the final stage, when the draft treaty was virtually drawn up, the question for us was as follows: Either adopt the agreed levels or insist on their being revised, which would in actual fact have meant new and possibly very protracted talks.

I think that we acted correctly in signing the treaty, as do our military (I can cite Lieutenant General F. Ladygin's

PRAVDA interview, 7 December 1990); the armaments "allocated" to us will be perfectly adequate for defense, and our new military doctrine is based precisely on this. I think that all international agreements need to be seen in the overall context of the changing political and military-strategic situation in the world. The Treaty on Conventional Armed Forces in Europe is only part of the disarmament process that has developed in recent years. The Treaty on Intermediate-Range and Shorter-Range Missiles is now almost fulfilled. It is planned that the USSR and U.S. presidents will sign a treaty on a 30-percent reduction in strategic offensive armaments next February. The process of reducing armed forces in Europe will not end with the concluded treaty. There is already an understanding between the sides on Vienna-2—talks at which questions of further reducing levels of military confrontation on the continent will be studied. The Soviet Union considers that it is time to expand the talks.

It is very important to see the whole picture when evaluating agreements in the military sphere. I am thinking of the new political reality developing in the world: the end of the cold war, the move from confrontation to cooperation, and the creation of new security structures in Europe. Simple arithmetic—who has more tanks—is giving way to the higher mathematics of new political thinking, according to which our world is one and indivisible, the security of some peoples cannot be built at the cost of the security of others, and a country's social and economic health is becoming the main element of a state's power.

Of course, reader V. Kazakov is right when he says that it will be necessary some day to address the problem of limiting or even banning the qualitative improvement of armaments rather than just quantitative reductions. I think that the present accords on eliminating already-existing armaments serve as a way of approaching the solution of this task, since they narrow the sphere of the arms race.

### TV Shows Soviet Troop Withdrawal From CSFR

LD0201211691

[Editorial Report] Moscow Central Television First Program Network in Russian, in its "Vremya" newscast at 1800 GMT on 2 January 1991, carries a two-minute video report by correspondent A. Samylin stating that all Soviet units will be withdrawn from the CSFR within six months. Quoting M. Sychra, deputy chairman of the CSFR Federal Assembly commission for the withdrawal of Soviet troops, Samylin reports that "of all the formations stationed in the CSFR just 10 months ago, only 25 percent still remain in the country."

Samylin says: "The fact that the troops have been withdrawn ahead of schedule is important from a political point of view. There are still controversial issues concerning compensation for damages. And a draft treaty has been drawn up. Miroslav Sychra says that the talks were not easy. But there is a protocol which will

underpin the inter-governmental agreement. Mutual pledges also exist. But a great deal still needs to be revised. In the words of Miroslav Sychra, I would like to add that the competent Soviet commission which will arrive here in January, consisting of USSR Supreme Soviet deputies and experts from the USSR Ministry of defense, will also help to put the final touches in the question of the withdrawal of Soviet troops."

The video shows scenes of marching troops in Slovakia.

## SHORT-RANGE NUCLEAR FORCES

### Commentary Criticizes New UK Nuclear Weapon

LD2712223490 Moscow Domestic Service in Russian  
1900 GMT 27 Dec 90

[Aleksandr Malikov commentary]

[Text] The cold war has ended. However, not all the old attitudes have disappeared with it into the past. The British idea of nuclear deterrence seems to be getting a new lease of life. Listen to what our correspondent, Aleksandr Malikov, has to say.

[Malikov] The British newspaper THE INDEPENDENT has reported on the government's plans to begin equipping its nuclear forces with tactical air-to-surface missiles [TASM]. In theory these are supposed to be the replacement in the British nuclear arsenal for the nuclear bombs carried aboard Tornado aircraft. British military experts claim that there will be fewer nuclear warheads on the TASM than the nuclear bombs that there were before. But, as always, they fail to mention the main point—that the power and accuracy of these warheads are incomparably greater.

Now, the question arises, who will supply these missiles? The Americans have two systems. There is also a joint program for a similar Anglo-French system on the drawing board. The choice is eventually most likely to fall on the Anglo-French missile since the Americans have already let it be understood that, because of treaty commitments, they will be obliged to review their promises on the supply to London of other nuclear weapon systems in addition to the Trident-2 missiles. Incidentally, THE INDEPENDENT reported that Britain also intends to continue its program for the deployment of Trident missiles. The final decision on the deployment of the TASM's in Europe is to be made at a NATO meeting at the beginning of next year. This decision, if it is made, will have to be endorsed by the new cabinet.

Representatives of the British Campaign for Nuclear Disarmament are against the plans to deploy TASM's. They say the plans contradict the agreement on the reduction of intermediate-range missiles in Europe and undermine the atmosphere of trust. The Labour Party will also oppose these plans if Great Britain decides to go

ahead unilaterally and deploy the TASM's only on its own territory. They regard this as a manifestation of the cold war mentality.

Well, shadows from the past are still capable of emerging from the gloom and casting a cloud over the new day in Europe. Despite the changes on the continent some Western politicians have not lost the habit of keeping an axe under the counter, even if this axe is a nuclear one.

### Nuclear Modernization in Britain Examined

LD2812223590 Moscow in English to Great Britain and Ireland 2000 GMT 28 Dec 90

[Sergey Sayenko commentary]

[Text] The INDEPENDENT reports that the obsolete types of tactical weaponry will be replaced with new airbased missiles. These air-to-ground rockets are to substitute (?for nuclear) bombs numbering 700 in UK. British military experts claim that modernization will make it possible to cut down the number of nuclear warheads in Britain, but, as they often do, they make no mention of the most important point—the new warheads are much superior to the air bombs in yield and accuracy. (?So the) new airbased tactical missiles will be capable of reaching targets inside the territory of the USSR, although NATO'S military strategists prefer to keep silent about this.

It looks as if the modernization of Britain's tactical nuclear arsenal is a settled affair. What is not clear yet is who will supply these new weapons. Earlier this year there have been press reports that the supplier will be the United States, but now, as evidence suggests, the Americans have made it clear for their ally that due to contractual pledges to the USSR they will have to reconsider the promises to supply Britain, in addition to Trident-2 missiles, other systems of nuclear weapons. In this connection Major's cabinet is inclined to cooperate with France. Independent estimates say it will cost almost \$2 billion for France and Britain to design a new tactical air-to-ground missiles. The final decision on siting new nuclear missiles in Britain is to be adopted at a conference of NATO early next year. If such a decision is adopted, it is to be endorsed by the new British Government and, as observers believe, Major's cabinet is not going to abandon plans to deploy new tactical weapons in UK, even despite the fact that 60 percent of Britons, as a poll by CND [Campaign for Nuclear Disarmament] indicates, censure plans to site new nuclear arms in the country.

There is every indication that the world recognition that the cold war between the East and the West is over is not fully realized in NATO, nor obsolete notions have gone, otherwise what can explain the fact that the ideas to modernize Britain's nuclear potential seem to be taking effect? London's decision to acquire new missiles totally disagrees with the statements earlier made by the defense Ministry to cut the military budget. Britain's new step

towards building up nuclear potential will hardly contribute to easing world tension and further bettering East-West relations.

## NUCLEAR TESTING

### Fate of Semipalatinsk Site Pondered

91WC0030A Moscow AGITATOR ARMII I FLOTA  
in Russian No 19, Oct 90 pp 10-12

[Interview with Maj Gen F. F. Safonov, conducted by Maj A. Soshnikov, AGITATOR ARMII I FLOTA correspondent: "The Test Range and Surrounding It"; date and place of interview not given]

[Text] Today you will hear everything conceivable about the Semipalatinsk test range. But we nonetheless think that first-hand information is the most valuable. It was no accident that the questions our correspondent asked to Maj Gen F. F. Safonov, a delegate to the 28th Party Congress, touched on the problems of the central nuclear test range. It was there that Fedor Fedorovich became a winner of the State Prize, the test range's deputy director for research work and a general; as a matter of fact, it has been a quarter of a century now that he and his family have been living in the city of Kurchatov.

[Soshnikov] Fedor Fedorovich, the test range has existed for more than 40 years now. But it was only recently that it started being spoken about openly. The views of its existence are polar opposites. To what do you attribute that?

[Safonov] The negative position regarding the test range began to emerge when nuclear explosions started to be openly announced—on the radio and in the press. Chernobyl "helped." It frightened everyone. It drew attention to the nuclear specialists' problems. In addition, I am certain that it was advantageous for the Semipalatinsk Party Oblast Committee to take that stand. It allowed it to divert public opinion from other problems. People in that region are worse off than people are, on the average, in Kazakhstan as a whole. The oblast is not industrial and consequently receives fewer subsidies. Poor medical care, food supply and cultural and everyday-service facilities, less than full employment, and so forth. And the fact that an occasion has been found to blame all the troubles on the test range is advantageous to the local leadership. The leaders of the informal associations that emerged on the eve of elections for people's deputy also took advantage of the "find." One of them is Olzhas Suleymenov, who became head of the Nevada-Semipalatinsk movement. Utilizing the test-range theme, he achieved success in Ayaguzskiy Rayon of Semipalatinsk Oblast. Such a rise in political activity, and outbursts of anti-test-range demonstrations have occurred precisely during periods of elections at various levels. Interested persons have skillfully played on the people's problems.

As for the negative position taken by most of the mass media toward the test range, I would attribute it to the fact that our opponents have made very active use of them, while journalists have not always taken the real state of affairs as their basis and have succumbed to emotions.

[Soshnikov] You undoubtedly have information about the real state of affairs at the test range and in the region.

[Safonov] Of course. Today Semipalatinsk Oblast occupies 87th place in the country in terms of cancers, infant mortality and other factors that characterize the state of health. But people are constantly being told that if something ails you, it is invariably from the test range. A child is born with some birth defect, and the same reason is given. Any other problem comes up, and once again the test range is to blame. Everything has started to be linked to it.

The Nevada-Semipalatinsk movement has money at its disposal. It maintains a staff of employees who casually put out distorted figures on the test range's impact on health for general perusal. On this account, we have verified data that have been squared with the results of a commission operating at the test range. It is headed by Prof. A. F. Tsib, corresponding member of the USSR Academy of Medical Sciences. On the other hand, our opponents have created the sort of situation in which it is extremely difficult for us of find a way of reaching the mass reader or viewer. Once some correspondents and television journalists came to see us. They gathered material and showed it on Barnaul television and published it in a number of newspapers. Yet they were immediately accused: How much were you paid?

[Soshnikov] You are losing to the informal groups. Does that mean that your position is the weaker?

[Safonov] I would not put the question that way. I think that one factor here is our leadership's position. Or more accurately, its complete lack of any position. We have been abandoned to the whims of fate. You yourselves fight for your viewpoint, we are told. And so, seeing our opponents distorting our work and, in general, distorting anything associated with the State Central Research Test Range, we got angry. And we wrote our first letter to N. I. Ryzhkov. Scientists and testers wrote him at their own initiative. There was no answer. Last November, because of the whipping up of the situation surrounding the test range, the inhabitants of Kurchatov adopted a resolution at a rally and sent it to the USSR Supreme Soviet for a decision to be made. Then the testers sent a telegram expressing their indignation over the actions of K. Boztayev, first secretary of the Semipalatinsk CPSU Obkom, and O. Suleymenov. In reply, complete silence from Moscow.

[Soshnikov] So you are defending your interests on a voluntary basis?

[Safonov] It works out that way. When we started to seek access to the Supreme Soviet, an agitation and propaganda group was established to counteract the passions being whipped up over the test range. I was elected its chairman, and Lt Col V. I. Tarasenko was elected deputy chairman. Another 12 people joined the group. They are highly qualified specialists.

Every attempt we made to speak out drew an extremely negative reaction from local authorities and media. For example, after my interview with the newspaper PRAV-ITELSTVENNYY VESTNIK, articles aimed at discrediting the test range's executives, along with a demand they be brought before a public tribunal, appeared in the local press. A. D. Ilyenko, it was said, was a war criminal, and I was his stooge. The demand was made that we be given a vote of no-confidence and dismissed from the army.

[Soshnikov] Are you opposed to the Nevada-Semipalatinsk movement?

[Safonov] I am an open supporter of it. But in the sense that the movement's participants set their original objective: the elimination of all nuclear test ranges on earth, and the halting of all nuclear tests. However, matters have turned into falsification and a struggle solely against the Semipalatinsk Test Range, which is a unique kind of applied-science center for nuclear physics. Finally the Soyuz group of people's deputies undertook a real study of the issue. Incidentally, their conclusions have also come under criticism from our opponents. It makes no difference that the group's work is objective; the main thing is that it does not fit into our opponents' plans. And so, O. Suleymenov in RABOCHAYA TRIBUNA reproaches them for having their instruments set wrong and for generally being unobjective. That is absolutely pure slander. The instruments were not ours but those of the USSR State Committee for Hydrometeorology and the USSR Ministry of Health. And the people in the group, with the exception of N. S. Petrushenko, have nothing to do with either the army or nuclear physics.

[Soshnikov] But since you can in no way reach agreement, that means there needs to be a commission satisfactory to both sides so that decisions will no longer be put in doubt.

[Safonov] That is exactly what we have proposed in the letter to N. I. Ryzhkov, in all our appeals to the top, at rallies and in items in the press. What do you think? If we knew that everything was so bad at the test range and surrounding it, would we have pressed for the involvement of an independent commission with any makeup whatever? Of course not. The trouble is that our opponents will not engage in normal businesslike discussion. For example, O. Suleymenov visited the test range twice. He was shown everything that he wanted to see. After that, he said that he had expected to see something entirely different: torn-up land and mangled heaps of metal. But he did not see them. You live here, he said,

and are engaged in an important state business. Go ahead and live here and engage in it as you choose. But let's unite in the struggle against test ranges throughout the world and for halting nuclear explosions in general. We replied that we supported that stand and that the Nevada-Semipalatinsk movement could consider us its allies. But after leaving the test range, O. Suleymenov started saying something entirely different.

[Soshnikov] What, in your view, will the test range's future fate be? What would you propose as a solution to the problem?

[Safonov] It is not yet clear. The tests, as you know, are not being conducted, and from every indication will not be resumed in the near future. I would propose that the following be done: assign the independent commission we have spoken of the task of comprehensively assessing the existing situation and presenting its proposals for a specific solution. My own viewpoint is that it is inadvisable to move the test range to a different place. The move alone, by my calculations, would cost 400-500 million rubles. And subsequently five to six times that amount would be needed. It would probably be better to give that money to the inhabitants of regions adjoining the test range, as is being done in Nevada. Incidentally, in contrast to our case, everyone conceivable except the inhabitants of the adjoining regions votes against that test range. And they are quite tolerant of the test range's employees thanks to government compensation.

At our test range, I believe, it would be possible to reduce the power of nuclear charges by a factor of three to five. That would be a bit worse, of course, for the effectiveness of scientific research, but I believe that it is tolerable. As a trade-off, the seismic effect that our opponents rely on would disappear. Incidentally, despite their assertions, I can say emphatically that a substantial part of the test range is open for use for economic needs. With the exception of certain points.

**And the stand-off continues. The Nevada-Semipalatinsk Movement has its supporters, and the test range's employees have theirs. The conflict has dragged out. And only those on whom the final solution of the problem of the State Central Research Test Range depends still remain silent. What is missing is a decision on its fate. There has also been no decision on the establishment of a commission whose conclusions would set everything straight.**

### **Journalist Visits Nuclear Weapons Facility**

*91UM0220A Moscow KRASNAYA ZVEZDA  
in Russian 25 Dec 90 First Edition p 2*

[Article by KRASNAYA ZVEZDA correspondent Lieutenant Colonel O. Falichev: "Los Alamos' Near Nizhny Novgorod"]

[Text] Azarimas-16—Moscow—For decades there has been an opposition between the U.S. nuclear laboratory at

Los Alamos and its unknown analog in the USSR. We now relate certain information for the first time.

One might say we have gradually become accustomed to glasnost, and sometimes we fail to take note of dynamic activity in the opening up of our society. After material came out on the Novaya Zemlya nuclear test facility (10 Nov 90), I remember thinking to myself—wouldn't it be nice if we could visit not just the explosion site, but the place where our atomic bombs are manufactured? To talk with scientists and employees and find out what problems the people are having who acquired for our state strategic parity with the United States.

**Such an opportunity recently presented itself.**

The train left Kazan Station on schedule at precisely 2100 and we were at our destination by morning. I must say, I have never arrived like this at any city. When the conductor announced our arrival, I looked out the window. In a wall to the right and left stood... forest. There were no train station structures, not even a platform. Just a guard with automatic weapon by the tracks, and a little farther up, an access control point.

Up until very recently, this small paramilitary town called Arzamas-16 was a top secret site. I might add that today it is far from being open to all. For it is right here in the All-Union Scientific Research Institute for Experimental Physics (VNIIEF) that, figuratively speaking, our nuclear programs materialize. Our first atomic bomb was created here, then the hydrogen bomb. Many, many unique technological achievements and scientific projects were born here.... And so we must not only talk about the institute, but about the multipurpose scientific research center which has been represented by such prominent scientists and physicists as Academicians I. Tamm, Ya. Zeldovich, A. Sakharov....

For many years, unfortunately, we did not know to whom we owed the parity achieved. The necessary super-secrecy of that time in that regard was evidently not limited to what would stand us in good stead. But what's done is done. I do not set for myself the task of digging into the past. It is far more important, I believe, to try to answer the question: What is the institute today, and does the country need it? Because there is some doubt on this score, particularly on the part of certain radically oriented deputies at various levels. What are their conclusions?

This institute constitutes the leading enterprise engaged in the development of nuclear ammunition for all branches of the military. It bears responsibility for their modernization and improvement, impossible without actual testing. And so, with its closure or conversion, the need to conduct nuclear-burst testing fades away. Such logic is not void of justification. It coincides with the principles espoused by activists of the anti-nuclear movement: It is enough to unilaterally put an end to atomic bursts, to show a good example, and everyone will follow along behind us in the end.



One might welcome such a daring and simple approach. But actuality shows us that such hopes are as naive as they are illusory, unfortunately. I am not about to recall when, how many times, and why our testing facilities were silent, how many appeals were made to the U.S. Government, including on the level of people's diplomacy. Alas, they didn't want to listen to us. Not the United States, nor France, nor England, nor China.

But is it possible that one of these countries, that very same America let us say, plans to do this in the near future?

A program for nuclear armaments modernization has been drawn up and approved by the U.S. Congress at a cost of \$81 billion. One of its sections states: over the course of more than 40 years, American nuclear forces have been the cornerstone of safeguarding security in the free world.... In any case, in the future, as it was in the past, the arsenal of nuclear weapons must be developed dynamically. Our modern level of knowledge, as rich as it is, cannot guarantee the required level of security in the absence of nuclear testing. As we can see, future prospects diverge greatly from our hopes and the Los Alamos laboratory is to play an important role in this program. Can we fail to take this into account?

"If we fall behind the Americans, it will simply be impossible to catch up," director V. Belugin of the All-Union Scientific Research Institute for Experimental Physics believes. "I recall that when we asked the Japanese how far we were behind them in electronics, the answer given was 'forever.' Isn't this why in our time we have come to call electronics and cybernetics pseudosciences?"

Professor I. Sofronov, doctor of physics and mathematical sciences, F. Gudim, deputy chief designer for testing, A. Pavlovskiy, corresponding member of the USSR Academy of Sciences, and other scholars have spoken with anxiety concerning U.S. projects on third-generation nuclear weapons. All agree that if the Americans implement SDI and deploy weapons in space, strategic parity will be destroyed and we will deprive ourselves of the opportunity to issue an appropriate response. They stress, therefore, that they can hardly share Academician V. Goldanskiy's view that "full-scale testing, including nuclear-burst testing, is in no way necessary to check nuclear weapons reliability and safety," that mathematical modelling and computer calculations can replace this. How can discussion here proceed when our most powerful computers are an entire order of magnitude behind American computers in memory capacity and number of operations that can be performed per unit of time? This is a well-known fact. In spite of this, the Americans continue to conduct actual testing on a test range in Nevada.

This is why infringing upon the institute would put an end to the efforts of scientists for many years, would bury that which was created by generations of our finest minds and made us strong.

"We have noted a gap in a number of projects because of interruptions in our testing," states R. Ilkayev, deputy chief designer, doctor of physics and mathematical sciences. "People have simply started to leave...."

And really, how can you not leave when the average wage at the institute is not all that high, and cooperatives are immediately offering 600 rubles and more. Whereas before, the almost continuous residence "behind the barbed wire" was compensated for by certain benefits, now, deplorable as it may be, the town has even introduced coupons for... matches.

Let me emphasize that I too am in favor of reduced expenditures for defense, for conversion—including of institutes such as this. But on a basis of adequacy, and taking into account the possible consequences. I have been told of how it was initially proposed to turn this most unique scientific research center into hardly more than scrap and samovars. Yes—to tear down, not to build. Thank God they looked into the matter and came to understand what benefit the institute can provide the economy. And it is already doing so. Here are some examples.

Ten percent of the institute's capacities—and therefore its production output—constitutes consumer goods. And we are not talking about samovars, but products one need not be ashamed to put on the world market and sell for currency. A well-known Soviet ophthalmologist spent considerable funds to acquire complex instruments from abroad, including instruments for measuring the radius of curvature of the cornea. But it turns out they still did not fully meet his requirements. At his request, the institute devised in a short period of time a cheaper and more reliable instrument which can scan the cornea using a laser beam. Today this instrument can be sold successfully on the domestic as well as the world market. The impulse graphite reactor, used in modelling accidental processes and creating safe nuclear energy, has gained world recognition. At a Belorussian request, mobile ecological laboratories and dosimeters have been developed and are being produced. On the order of the Kuybyshev State Bearing Plant, we have a unique device for quality-control monitoring of the surface of ball bearings in the atmosphere.... There are agreements with the Volga Motor Vehicle Plant and other firms and enterprises of the country. A great deal of the production and technology here has "know-how" [rendered in English transliterated into Russian] status; i.e., it is especially unique.

I do not know who or how, but I believe that with the general collapse and chaos we see in the economy, scientific production complexes such as this will provide a stimulus to rebuilding the country's economy and assist in effecting technological breakthroughs.

Then too, this will depend to a great extent on our youth. Unfortunately, whereas previously graduates of the finest institutes of higher education desired to go to Arzamas-16, the situation today is different. But without

a stream of young cadres, without continuity, how can we even talk about maintaining school and tradition?

"Physics is an experimental science," stated academician Yu. Khariton, permanent science director of the institute, as we said goodbye. "And without continuity, nothing can be achieved here."

These words from the elder of atomic scientists perhaps best of all reflect the essence of the problem, which must be resolved not on impulse, but on deep reflection, proceeding from the interests of our state and its security.

#### **Nuclear Test Resumption in Kazakhstan Denied**

*LD2712204190 Moscow in English to Great Britain and Ireland 2000 GMT 27 Dec 90*

[Text] A spokesman for the parliamentary committee for the environment in Kazakhstan has denied media reports that nuclear arms tests will resume at the Semipalatinsk test site in his republic. He said the reply of the Soviet Defense Council to their inquiry unequivocally states there have been no decisions on the continuation of tests in Semipalatinsk.

#### **Kazakh Official Quashes Nuclear Test Rumors**

*PM2812161790 Moscow IZVESTIYA in Russian 28 Dec 90 Union Edition p 5*

[Report by IZVESTIYA correspondent Oleg Stefashin under the rubric: "Direct Line": "Test Range Remains Silent"]

[Text] Karaganda—M. Nurtazin, chairman of the Kazakh SSR [Soviet Socialist Republic] Supreme Soviet Committee for Questions of Ecology and the Rational Use of Natural Resources, has denied the report circulated by certain news media that nuclear weapons tests are to be resumed at the Semipalatinsk test range.

As is well known, the republic legislature has expressed its attitude to this problem with utter clarity, banning the carrying out of nuclear explosions and the testing of other kinds of weapons both on the test range itself and throughout the rest of the territory of Kazakhstan. Soon after the issuing of this resolution, however, reports appeared in a number of central publications that the USSR Defense Council does not intend to take into account the expression of the sovereign republic's will and intends to carry out a total of 18 more underground explosions in the Semipalatinsk area in the next two years. This has, incidentally, also been stated in the press by E. Gukasov, deputy chairman of the Kazakh SSR Council of Ministers, citing documents in his possession.

It is only natural that the republic should have been swept by a wave of protest, which has assumed serious proportions. The situation in many regions has become severely charged. This forced members of legislature to approach the USSR Defense Council for clarification.

"The answer received by us," M. Nurtazin stated, "indicates unambiguously that neither the Defense Council nor the president himself has taken any decisions to continue tests at the Semipalatinsk nuclear test range. The rumors circulated have proven to be false."

Asked who benefited from trying to mislead people, M. Nurtazin stated that he personally suspects populists, who have sought to acquire political capital by destabilizing the situation in the republic.

#### **Kazakh President Cited on Future Nuclear Tests**

*LD0101120791 Berlin ADN in German 1127 GMT 1 Jan 91*

[Text] Moscow (ADN)—Kazakhstan President Nursultan Nazarbayev fears "political and social repercussions" in his republic if Moscow continues with its nuclear tests at the Semipalatinsk test site. Nazarbayev told the Soviet news agency NOVOSTI that all talks between the Kazakh leadership and Defense Ministry leaders have so far remained unsuccessful. Everybody is sticking to his positions. Irrespective of the fact that Kazakhstan has strictly banned any further nuclear tests on its territory, it has recently emerged from the army leadership that a total of 18 underground nuclear explosions in Semipalatinsk have been planned for 1991 and 1992. The Kazakhstan president sees in the attitude of Defense Minister Yazov a sign of the "imperial policy of the center" which refuses to abandon the totalitarian system which exists in the USSR. "Obviously, the center has no idea of the real situation that exists here," Nazarbayev said. "They should finally understand that there will be no turning back from sovereignty in the republics. Policies should be developed which are based on that premise."

#### **U.S. Experts Urge Complete Nuclear Test Ban**

*LD0301161591 Moscow TASS in English 1604 GMT 3 Jan 90*

[By TASS military writer Vladimir Chernyshev]

[Text] Moscow, January 3 (TASS)—A group of eminent U.S. specialists in the field of armaments has sent a letter to George Bush, calling for a complete ban on nuclear tests.

U.S. experts justly emphasise that this ban is the most decisive measure that can be taken to stem the proliferation of nuclear armaments.

The time is right for a decisive step: the complete prohibition of tests. The 1963 treaty banning nuclear weapon tests in the atmosphere, in outer space and underwater (or partial test ban treaty) could be made complete and universal at a U.N.-sponsored conference, which is scheduled for this month. This unique chance that should not be let slip away. [sentence as received]

The current international situation is clearly favourable for this drastic move. As Soviet-U.S. relations become

more friendly, nuclear rivalry between the United States and the USSR can be regarded as almost ended.

A comprehensive ban on nuclear weapon tests would suit ideally the new world order, about which the U.S. President speaks so frequently. It would leave rivalry in the nuclear field far behind and prevent a new twist in the nuclear arms race. What can be the meaning of the programmes to build third-generation nuclear weapons, now being implemented in the United States?

It will be recalled that in ratifying the so-called threshold treaties—the 1974 treaty on the limitation on underground nuclear weapon tests and the 1976 treaty on underground nuclear explosions for peaceful purposes—the Soviet parliament adopted the appeal to the parliaments of the world to halt all nuclear tests.

In the view of the urgency of this problem, the USSR proposed the United Nations member-states think about the expediency of a world parliamentary referendum on the complete ban on nuclear tests.

In 1985-1987, the Soviet Union imposed the 19-month moratorium on nuclear tests and Soviet nuclear test ranges were again silent for almost a year—from October 1989 to October 1990.

What is the official stance of the United States' leadership? It continues to argue that as long as nuclear weapons exist, it should preserve for itself the right to test them. But full-scale tests, including nuclear explosions, are not the only means to verify the reliability and safety of nuclear weapons. Many experts, both in the USSR and the United States, think that this can be done by checking separate components of nuclear weapons and also mathematical experiments.

Finally, one more circumstance is also important. The fate of the treaty on the non-proliferation of nuclear weapons, the extension of the term of which will be considered in 1995, will be unclear without the complete ban on nuclear tests. By denying nuclear weapons their special status, the regime of this important treaty can undoubtedly be preserved and strengthened.

## CHEMICAL & BIOLOGICAL WEAPONS

### Foreign Ministry's Churkin on Delay in CW Accord With U.S.

LD0401160291 Moscow TASS in English 1531 GMT  
4 Jan 91

[Text] Moscow, January 4 (TASS)—“On December 28, 1990, the USSR and the United States agreed to extend the term for drafting documents to an agreement on the destruction and non-production of chemical weapons [CW] and on measures for the advancement of a multi-lateral convention to ban chemical weapons, signed by the Soviet and U.S. Presidents in Washington on June 1, 1990,” a Soviet spokesman said at a briefing here today.

Vitaliy Churkin, head of the Soviet Foreign Ministry Information Directorate, recalled that under the provisions of the agreement, both sides had to prepare, by not later than six months after its signing, detailed provisions on bilateral verification, including trial challenge inspections, and a protocol on inspections not later than December 31, 1990.

Churkin said that to complete these documents within the fixed term, the Soviet and U.S. delegations conducted three intensive rounds of talks this year. He stressed that the talks were constructive and both sides exerted maximum efforts to meet the aforementioned terms. However, several issues of an objective nature and calling for additional study emerged during the work.

Churkin added that the USSR and the United States agreed to resume talks on these issues in Geneva on January 15, 1991.

## ASIAN SECURITY ISSUES

### Hope Seen for Talks on Naval, Air Force Cuts

90WC0034A Moscow KRASNAYA ZVEZDA  
in Russian 27 Dec 90 First Edition p 3

[Article by A. Golts: “We Are Starting To Break the Ice”]

[Text] Is it possible to have coordinated armed forces and arms reductions and to implement confidence-building measures, similar to those that have established right now in Europe, in the Asian-Pacific Ocean region? Until quite recently, many people would have simply answered this question: “No.” And they would have noted the regional conflicts that have been raging on various parts of the continent and also naturally American-Soviet confrontation as the reasons.

However, this situation, which had already become customary in Asia and in the Pacific Ocean, seems to have begun to change in recent months. Let us begin with regional conflicts. In the French capital, representatives of the belligerent parties in Cambodia have finally approved the basic provisions of a peaceful resolution plan which will be conducted with UN participation. I will point out that they succeeded in achieving this thanks to the significant efforts of the representatives of all five nations which are permanent members of the UN Security Council. Thus, cessation of combat operations in Indochina already does not appear to be a remote prospect.

It seems to me that new opportunities to normalize the situation on the Korean Peninsula are making themselves known. Relations between Moscow and Seoul will certainly become a positive factor here. It is already significant that the joint declaration the two countries recently signed openly states that the use of force or threats of its use in interstate relations is inadmissible.

This commitment is quite vital at a time when contacts between North and South Korea are being impeded due to mutual distrust. We all know that the normalization of relations between the USSR and the Republic of Korea which has occurred has caused a negative reaction in the DPRK [Democratic People's Republic of Korea]. But if we are objective, we must see that this normalization can only promote an inter-Korean dialogue.

American-Soviet interrelations are also experiencing a qualitative change in this area. "The superiority of the American and Japanese air forces and navies over Soviet military power in the northern portion of the Pacific Ocean made sense within the framework of a global strategy called upon to create a counterbalance to the superiority of Soviet forces in Europe. However, right now this has been transformed into an "anachronism"—states the Hong Kong magazine "Far Eastern Economic Review." It seems that Washington also understands this and proposed American troop reductions in Asian countries have already been announced. Moreover, having stated that they already no longer view the USSR as an enemy in the Pacific Ocean, the United States has expressed its readiness to discuss with the USSR such acute issues as, let us say, the problem of nuclear weapons deployed in South Korea. I recall that South Korea is the only place in Asia where the Pentagon admits that such weapons are present.

At first glance, the information that just arrived from Tokyo appears to be nothing out of the ordinary. The Japanese government just approved the next armed forces five year development program. It seemed to be the same as five years ago. It proposes the deployment of hundreds of new tanks, armored vehicles, artillery systems, dozens of aircraft, and the purchase of the most modern destroyers and submarines for the allocated solid sum of 28 trillion yen. However, I will not rush to agree with the "Japan Times" commentator who saw in this program only confirmation of "Japan's inability to adapt to radical changes in the international security system."

Anyway, there really are changes. According to the new program, military expenditure growth rates are being reduced practically two fold. Now they will be annually increased by 2.9 percent in contrast to the previous 5.4 percent. Naturally it would be better if these expenditures did not increase but decreased. But be that as it may, a positive trend is present.

Especially if you consider that quite unexpected words were heard this time besides the customary statements about the threat that allegedly originates from the USSR. "It was previously thought that a latent Soviet threat exists," Chief Cabinet Secretary M. Sakamoto stated at a news conference. Believe me, this statement is worth a great deal coming firsthand from a highly-placed Japanese official.

In short, serious preconditions for a collective review of existing security concepts and the elaboration of new

ones based on cooperation and not on confrontation are precisely present today. Incidentally, if the USSR alone previously worked on the creation of this system, today such states as Canada and Australia are moving along these lines. All of this convinces me that, despite climactic patterns, we are beginning to break the ice of confrontation on the Pacific Ocean at the end of December.

### **Gorbachev on Disarmament, Confidence-Building in Asia-Pacific**

*PM2912210190 Moscow PRAVDA in Russian  
30 Dec 90 First Edition pp 1, 5*

[Written answers by Soviet President Mikhail Sergeyevich Gorbachev to questions from ASAHI SHIMBUN President Toshitada Nakae: "M.S. Gorbachev Answers to Questions from Toshitada Nakae, President of the Japanese Newspaper Company ASAHI SHIMBUN"—for the full text of the interview, see the FBIS Daily Report: SOVIET UNION, 31 December 1990, pp 2-5.]

[Excerpts] As previously reported, on 28 December, USSR President M.S. Gorbachev received a delegation from the influential Japanese newspaper company ASAHI SHIMBUN, headed by its president, Toshitada Nakae. The delegation is currently visiting Moscow at PRAVDA's invitation. The USSR President provided written answers to questions from the Japanese journalists.

1. [Nakae] [passage omitted] What system of control must be created in the future to prevent regional conflicts from flaring up? What role do you think the United Nations can play in the new international order now taking shape?

[Gorbachev] [passage omitted] Institutions inconceivable in the past are emerging to "service" the new world politics. You know that a Center for the Prevention of Conflict was set up as part of the Helsinki process. In the future it seems likely to become a kind of "pan-European security council." Its experience might then be adapted to the Asia-Pacific region too. Meaning, of course, the creative application of that experience, given the specific features of the regions involved and the subjects of the collaboration. [passage omitted]

4. [Nakae] The USSR has put forward an initiative for holding a pan-Asian summit conference. When will that be feasible, in your opinion? And what should the main aim of that forum be?

[Gorbachev] We have to move toward Asian accord in a measured way, stage by stage and step by step. It is going to take time for the potential participants in the future meeting to recognize the need for it and to make preparations. We think of it as an important start in facilitating the settlement of conflicts, place the resolution of

disputes between certain states on a basis of law, and assist progress toward rapprochement on current differences.

Naturally the meeting has to be preceded by bilateral and regional consultations at various levels—among diplomats, business circles, military people, experts, and the public. You know that the foreign ministers of all the Asian states have received invitations from us to come to Vladivostok, with a guide date of fall 1993. At that conference it would be possible to fix both a date and a venue for an Asian summit meeting, which would be difficult to imagine without the United States, Canada, Australia, and New Zealand.

If we consider that the whole of North America and the entire Soviet Union took part in the Paris meeting in November 1990, it is clear that its decisions and conclusions do not only concern Europe proper—from the western shores of Iceland and Portugal to the Urals. So also the pan-Asian meeting is bound to have importance beyond Asia proper—it will be Asian-Pacific. And the ultimate aim of the process in the Asia-Pacific region is obvious—to turn what is now a highly militarized region into a zone of stability, good-neighborliness, and cooperation.

5. [Nakae] Does the Soviet Union intend to put forward new initiatives on the Korean peninsula, in the interests of the peaceful unification of North and South Korea? What measures will aim at disarmament and confidence-building in the Asia-Pacific region? What should Japan, the United States, and the PRC be doing in conjunction with the USSR in this direction?

[Gorbachev] It is not a question of transplanting the Helsinki principles to Asian soil. The point is to give second wind to the Bandung principles, born of Asian civilization, taking into account European and worldwide realities. Any mechanical copying will not work.

How precisely the unification of Korea is to come about is something that can only be decided by the Korean people on both sides of the 38th Parallel. We welcome the intra-Korean dialogue that has begun. If some kind of international assistance or guarantees are required, the Soviet Union could take part in them if invited.

We are not just appealing for disarmament and confidence-building in the Asia-Pacific region but have already done much ourselves. In accordance with the Soviet-American treaty all medium- and shorter-range missiles are being destroyed in the Asian part of the USSR too. The Soviet Union has decided unilaterally not to boost its nuclear potential in Asia. The armed forces in the east of our country are being cut by 200,000 men. We have fewer troops left in the Far East than South Korea. The numbers of aircraft deployed there are being reduced. Some warships are being withdrawn from the Pacific Fleet.

The withdrawal of Soviet troops from Mongolia is approaching completion. Soviet presence in Vietnam's

Cam Ranh Bay is ending. The Soviet Army and Navy in the Asia-Pacific region is being assigned purely defensive tasks.

An agreement was signed this year between the USSR and PRC governments on the principles for a mutual reduction of armed forces and a strengthening of confidence along our common border. In the future we will be talking about demilitarizing it altogether.

We are pleased to note the U.S. intention to partially reduce its military presence in the Far East. We are ready for constructive discussion of any initiatives which can really lead to a balanced reduction in the levels of military confrontation in the region in both nuclear and conventional arms, including naval forces, of course.

6. [Nakae] A line was drawn under the history of the postwar period on the continent of Europe as a result of German unification and the CSCE meeting this November. How, in your opinion, will the process of transforming Europe proceed? How do you envisage the future security system as a new order takes shape in Europe? When, in your opinion, will the simultaneous elimination of NATO and the Warsaw Pact take place?

[Gorbachev] German unification was indeed a crucial prerequisite for overcoming the division of Europe. However, both this event and the changes in East Europe themselves became possible thanks largely to the deep changes in the policy of the Soviet Union as a result of our perestroika.

The foundation of a new European order was laid at the Paris conference. How do I see the future Europe? I am sure that it will be a Europe that is united, democratic, and secure for all of its countries and peoples. A Europe without nuclear weapons and other means of mass destruction, with conventional weapons kept at a level of reasonable defensive sufficiency, and where the basis of common security will be ensured outside of blocs. And of course I see Europe as ready to develop links with the whole world.

7. [Nakae] The Treaty on Conventional Armed Forces in Europe was signed during the Paris conference. The prospects for Soviet-American talks on reducing strategic offensive nuclear arms have now become clearer. What is the USSR's next objective, if we are talking about the disarmament process—reduction of nuclear, conventional, or chemical weapons?

[Gorbachev] The disarmament process is indeed now scaling new heights. The signing of the Treaty on Conventional Armed Forces marked, in my opinion, an unparalleled breakthrough toward a peaceful and secure Europe. You are right, the preparation of the agreement on strategic offensive armaments has entered its final phase. It will mark an equally important breakthrough in the disarmament process and in the movement toward peace, where the security of all countries—large and small—is ensured by collective efforts and political will on a voluntary basis, working through the mechanisms of the United Nations rather than by force.

We want disarmament to become comprehensive in nature and progress to be made "on all fronts." Otherwise, if we block off some channels while leaving others open to the arms race, the danger will not lessen, but will

merely shift elsewhere, into other areas, and may even grow over time. The disarmament process must become global and be extended to every region, particularly the Asia-Pacific region. [passage omitted]

## CANADA

**TORONTO STAR Links CSCE Summit,  
Dismantling of NATO****19 November Editorial**

91WC0033A Toronto *THE TORONTO STAR*  
in English 19 Nov 90 p A18

[Text] A treaty was to be signed today as the presidents and prime ministers of 35 countries—all of Europe plus Canada and the U.S.—open three days of talks in Paris.

The treaty provides for a sharp reduction in conventional arms among the 22 nation of the Warsaw Pact and the North Atlantic Treaty Organization (NATO). But it says nothing about numbers of troops.

And the summit—of the Conference on Security and Cooperation in Europe (CSCE)—isn't going to discuss what happens to NATO now that the Cold War is over and the Warsaw Pact has all but collapsed.

The summiteers plan to create a more structured CSCE, with a permanent secretariat and a center for the prevention of conflict. The goal is to enable greater cooperation among Eastern and Western Europeans and North Americans.

So what's left for NATO to do?

And why should Canada, the U.S. and Britain continue to keep troops in Germany?

It's said that NATO, a military alliance, is still needed because there's lingering instability in Eastern Europe. But what does this mean? Will NATO forces intervene if there are food riots in Moscow, or ethnic strife in the Balkans or the Baltics?

At the Paris talks, Prime Minister Brian Mulroney and External Affairs Minister Joe Clark should be making a strong case to dismantle not just tanks and planes but NATO itself.

**24 November Editorial**

91WC0033B Toronto *THE TORONTO STAR*  
in English 24 Nov 90 p D2

[Text] This week the leaders of Canada, the U.S. and 32 European nations declared the Cold War dead and laid the foundation stones for a new Europe.

Before the start of the meeting of the Conference on Security and Cooperation in Europe (CSCE) in Paris, the heads of NATO and Warsaw Pact nations signed a historic treaty consigning thousands of tanks, armored cars, artillery and aircraft to the scrap heap.

Then the 34 leaders ushered in a new era of hope for peace in Europe by giving the CSCE a permanent secretariat in Prague, a center in Vienna for the prevention of

conflict, and approving a package of measures aimed at securing greater cooperation among nations.

Prime Minister Brian Mulroney lauded the agreements: "This summit launches a pan-European, trans-Atlantic structure that stands for liberty and democracy and justice and opportunity."

Those goals won't automatically be achieved. Hungarian Prime Minister Jozsef Antall raised concerns that "a new Welfare Wall may arise in the place of the Iron Curtain."

Soviet President Mikhail Gorbachev said the human race may no longer be threatened by nuclear war but faces "peaceful global problems, of environment, energy, food and water supply, social ills, crime, mass poverty, foreign debt."

Given those self-evident truths, Canada's performance at the summit was ambiguous.

Mulroney displayed leftover Cold War thinking in defending the continuation of NATO instead of arguing for its demise in tandem with the death of the Warsaw Pact.

He was more helpful in promising food supplies to help the Soviet people through a bleak winter.

It stability in Europe is the goal, supporting economic development and democratic reforms in Eastern Europe and the Soviet Union is far more effective than keeping NATO alive and maintaining Canadian, British and American troops on the continent.

## FRANCE

**Senate Report Favors Mobile Missile Project**

91EN0158A Paris *LE MONDE* in French  
28 Nov 90 p 9

[Article by Jacques Isnard: "Senate Report Proposes Deployment of Mobile Missiles, Eliminating One New Strategic Submarine"]

[Text] With American nuclear weapons being withdrawn from Europe pursuant to the START accords, the Soviet Union is expected to retain some 6,000 to 8,000 strategic warheads and another 8,000 tactical (prestrategic) warheads carried by mobile launchers. France is content to stay with 430 strategic warheads (soon to be 500), some 90 airborne ASMP [medium-range, air-to-ground] missiles, and 30 Pluton ground-to-ground missiles.

Considering this imbalance, senate rapporteur Xavier de Villepin (Centrist Union, representing Frenchmen overseas) urges in a report scheduled to appear this week, that France build a mobile nuclear missile (to replace the missiles on the Albion plateau) and finance it if necessary by elimination of one of the six new-generation strategic submarines currently planned. "France now finds itself in a front-line position in terms of the

prestrategic defense—if not the defense in general—of a Europe long sheltered under the NATO nuclear umbrella,” he writes.

In mid-October (LE MONDE of 17 and 21-22 October), Francois Mitterrand announced he had asked Defense Minister Jean-Pierre Chevenement to present him “precise proposals” for the modernization of France’s nuclear arsenal up to about the turn of the century.

The debate, which should conclude sometime next year with presentation of the 1992-96 military procurement bill, concerns a replacement for the 18 fixed-site S3’s which are buried in silos on the Albion plateau. Three options are open to the government: Building a new mobile ground-to-ground missile (to be called the S45), developing a long-range, air-to-ground missile [ASLP] to be launched from the Rafale warplane, or simply abandoning the Albion missiles in the year 2000 without replacing them.

#### Fourth Option

This is the first time a member of parliament has mentioned a fourth option, which many experts believe may have some merit in the current circumstances.

Mr. de Villepin notes that “the step-by-step nuclear disarmament of the Atlantic alliance in Europe actually strengthens France’s role in European deterrence for two reasons: First, the Soviet Union is renovating and qualitatively modernizing an arsenal that is quantitatively unchanged; second, a far from insignificant risk of nuclear and ballistic proliferation—against which deterrence may be ineffective—is posed by certain potentially threatening states.”

In these circumstances, it would be a mistake for France to limit itself to two “components” in its strategic arsenal of the future.

First of all, the submarines, stretched out over 15 years (from 1993 to 2008), the envisioned program of six new generation nuclear missile-launching submarines (SSBN-NG) of the “Triomphant” class to be ready after 1994 is expected to cost Fr126 billion (in 1990 money), this is counting the cost of the vessels themselves, as well as the M5 missiles with which they are to be armed. Given expected improvements in submarine detection, the rapporteur believes “it may be rash to rest the country’s defense, in the last resort, on a single strategic system, one that is not even deployed on French territory.”

As for bombers armed with nuclear-tipped ASLP’s, Mr. de Villepin considers that this aerial component, though perhaps effective at the prestrategic level, “is already obsolete, or at best, of uncertain utility in terms of the strategic mission,” which consists of “delivering a decisive blow” at long range. This is because the plane cannot attack deep into enemy territory without mid-air refueling, it is still subjected to very dense antiaircraft fire, and the missile’s maximum range of 1,000 km can only be achieved if it is launched from an altitude at

which it is very vulnerable and sacrifices 1,500 meters per second of velocity, which makes it easily intercepted.

From this series of observations, Mr. de Villepin deduced the necessity of having, in addition to the submarines, that remain “decisive for deterrent credibility,” and the bombers, which are “primarily a prestrategic instrument,” a “movable” ground-to-ground missile—which does not mean one that would be constantly in motion. “The mobile missile,” he writes, “is deployed at random at a number of protected and hardened sites (Albion, air bases)” in order to force an adversary to attack numerous targets all around the country.

According to Mr. Villepin, about thirty mobile S45 missiles costing around Fr 30 billion would be sufficient.

#### Billions for Hades

The senator wondered if such a “component” might not be paid for with the money saved by scrapping plans to construct a sixth SSBN-NG. He asked whether it is “really necessary to have six new generation submarines, armed with M45’s and later with M5’s, in order to meet the requirement for three of them to be at sea at all times,” as is the case at present. Mr. Villepin said he hopes the government will give serious consideration to the idea of abandoning the ground-to-ground “component” of deterrence in the context of European security. In his report, the senator also discussed the Hades, a prestrategic ground-to-ground missile with a range of 450 km, which is expected to replace the Pluton after 1992, and which “will be the only modern, mobile ground-to-ground missile deployed in Western Europe.” Initially the program envisioned about 60 launch vehicles and 120 missiles. Since then, it has been reduced on orders from the head of state to 20 launch vehicles and 40 missiles to be deployed in two artillery regiments at Mailly and Suippes, as previously reported (LE MONDE of 16 December 1989).

According to Mr. Villepin, the downsized Hades program is now expected to cost Fr13.5 billion, instead of the Fr17.5 billion originally estimated.

#### First Hades Regiment Operational in 1992

91EN0164C Paris LE MONDE in French  
1 Dec 90 p 10

[Unattributed article: “15th Artillery Regiment Will Be First Unit Equipped With Hades Missile”]

[Text] In 1991, the French Army will have only four regiments equipped with the prestrategic Pluton nuclear missile, compared to the five it has had in the past, according to a document from the Defense Ministry presenting a breakdown of the proposed budget for next year. One of the five regiments is being reorganized to handle the new Hades nuclear missile that will replace the Pluton.



The 15th Artillery Regiment, cantoned at Camp Suippes (Marne), will be the first unit to receive the Hades missiles, which are supposed to be operational in 1992. The unit's Pluton launch pads will be distributed among the remaining four regiments: the 3rd Artillery Regiment at Mailly (Aube), the 4th Artillery Regiment at Laon (Aisne), the 74th Artillery Regiment at Belfort (Territoire de Belfort), and the 32d Artillery Regiment at Oberhoffen (Bas-Rhin).

Unlike the Plutons fired from their 30 launch pads, the Hades are mounted on a wheeled semitrailer truck (instead of the AMX-30 tank chassis used for the Pluton). They have a range of 480 km (rather than 120 km) and carry a nuclear warhead with explosive power up to 80 kilotons (or four to five times the force of the Hiroshima bomb), compared to the approximately 20-kiloton warhead carried on the Plutons.

After the 15th Artillery Regiment at Suippes, the 3rd Artillery Regiment based at Camp Mailly will be restructured to handle the Hades missile. The program originally called for three Hades regiments, but now it seems clear the program will be limited to two regiments, since the Army (excluding the Rapid Action Force [FAR]) will have only two rather than three Army corps.

France's unilateral restraint in the field of prestrategic nuclear weapons also extends to the Air Force. Previously, the Tactical Air Force (FATAC) was organized into five air squadrons. Now the number of these squadrons, which are equipped with the Mirage 2000 N, has been reduced to three; the first two were declared operational in summer 1988 and summer 1989, while the third, which is still being constituted, is supposed to be ready in 1991.

## GERMANY

### Technical, Economic Impact of Arms Disposal Assessed

91WC0020A Bonn WEHRTECHNIK in German  
Nov 90 pp 59-64

[Article by Ministerialdirektor Dipl.-Ing. Joachim Heyden, department head for armaments technology in the Federal Ministry of Defense: "Technical, Economic Aspects of Disarmament and Restructuring Pan-German Armed Forces"—first paragraph is WEHRTECHNIK introduction]

[Text] On behalf of the Federal government Minister of Foreign Affairs Hans-Dietrich Genscher declared before the plenum of the Vienna Negotiations on Conventional Armed Forces in Europe (VKSE) on August 30 that the personnel strength of the armed forces of unified Germany would be reduced to 370,000 men within three to four years, that this reduction was to begin when the first KSE [conventional armed forces in Europe] treaty went into effect, and that in the context of this overall maximum size the land and air forces would number no more

than 345,000 men. This means that the personnel of unified Germany's armed forces will be substantially lower than the Bundeswehr's current strength and will be reduced to about half the current strength of the Bundeswehr and the NVA [National People's Army]. Given these political predeterminations, Joachim Heyden, engineer and ministerial director in the department for armaments technology in the BMVg [Ministry of Defense], in this article addresses, from the perspective of the department for armaments, the technical-economic aspects of disarmament and restructuring pan-German armed forces.

Dr. Irmgard Adam-Schwaetzer, state minister in the foreign office, gave a talk in Moscow on 13 August on the occasion of the UN conference on the subject of "conversion." She stated that the philosophical-intellectual aspect must first be emphasized, because conversion begins with conversion of thought. In addition, there is the industrial policy aspect which involves raising a question: What is the optimal way to shift arms enterprises to civilian production? Then there is the structural policy aspect with the question: How are regions which are especially dependent on a military-related economy being protected from unemployment and decline? In connection with the social and personnel aspect the question must be raised as to how the state will care for the soldiers who are no longer needed. Finally, in connection with the technical aspect, the question arises as to whether weapons or parts of weapon systems can be converted to production which is useful in the civilian sector, and be done in a manner which is irreversible and verifiable.

In the immediate future we cannot avoid discussing these specific aspects.

### Structural Change and Arms Conversion

Europe has overcome the Cold War. Nowhere is that more clearly apparent than in overcoming images of the enemy and the readiness of the countries in both alliances to no longer perceive one another as a threat.

The new thinking in the West and East also made possible the path to German unification. The Western alliance partners desire a new relationship with the countries in central and Eastern Europe as was stated at the NATO summit in London at the beginning of July. The current historical phase of development makes it possible for the countries in both alliances to agree on disarmament on a scope which was inconceivable a year ago. This involves not only reducing arms, but also simultaneously beginning to convert the arms industry.

Without a doubt conversion will not be without cost. Disarmament—at least for a period of transition—will mean putting up with economic disadvantages and in part clear restructuring in the regions affected. The economic consequences of disarmament will be particularly marked in two sectors: on the one hand, in the so-called conversion of garrisons, that is, troop reductions and a reduction in arms systems, and on the other

hand, in conversion in the real sense, that is, converting capacities for manufacturing military goods into capacities for civilian needs.

A reduction in the Bundeswehr as well as a withdrawal of foreign armed forces and any associated abandonment of or reduction in garrisons will in all probability become the by far greater problem as compared to what will possibly fall to Germany's defense industry. Difficulties in adjusting must be anticipated particularly in structurally weak regions, where most of the garrisons are located. But consideration must also be given to the fact that the process of disarmament will stretch over several years and it will thus be easier to cope with the adjustment process.

In view of declining military requirements the German defense industry will—just like a number of small businesses—have to cope with a distinct process of restructuring and diversification. For the problems which will arise from conversion will be substantially smaller than in countries with a high share of the gross social product in arms production, as for example in the Soviet Union with more than 15 percent (ours is about 1 percent).

Moreover—and that is the decisive point—the conversion process will take place in a market-based economic system in a manner which is fundamentally different from that in a plan-based one. In the FRG enterprises with defense capacities are an integral component of the market-based system; as a rule, in addition to capacities to manufacture products to meet military requirements, they also have capacities for the civilian market. This favors a constant reciprocal process of adjusting civilian and military development and production. The industry focuses on needs and can, to the extent it is possible for it to avoid one-sided emphasis on only military products, react flexibly to fluctuations in demand. In this respect conversion for us has been an ongoing process for a rather long time and in the last analysis is nothing more than a structural change which in a market economy can open up new opportunities for all. In the future it will be possible to use economic resources, which to date were tied to military tasks, for other sectors—as, for example, environmental protection.

Ideas on converting arms capacities into the kind suited to meeting civilian needs are not new. In 1982 the Federal government developed a basic position on this which is still valid even today. The basis of this position is that conversion of defense capacities in our market-based system falls within the jurisdiction of the affected enterprises themselves.

#### **Conversion, But Also Concerns of the Arms Industry**

The industry is always mindful of its responsibility for capacities, and it has also accepted this responsibility. The state cannot and will not prescribe in which areas of civilian activity enterprises should make their investments. For some time many enterprises have been reacting in a flexible way to the demand for defense material, which has shown a tendency to stagnate, and

have made an effort to expand their civilian production. Thus, for example, at Krauss-Maffei in 1988 a 19-percent slump in sales in the defense equipment sector was offset by a 26-percent increase in the civilian business sector. In 1989, for the first time, sales in civilian business were greater than in the defense industry. Even in other enterprises, as for example Rheinmetall and Dynamit-Nobel, sales in the respective defense equipment sectors are clearly declining in favor of other enterprise sectors.

The size and structure of the German defense industry raise expectations that the industry can definitely handle the necessary adjustments to reduced Bundeswehr requirements. In the case of the workers in this sector, amounting to less than 1 percent of gainfully employed people in the FRG, we are dealing primarily with highly trained personnel. Even a distinct reduction in these jobs, distributed over several years, would scarcely have a negative impact on overall employment because the high level of training and the very good economic situation of today and the foreseeable future can guarantee speedy reintegration in other sectors.

In the future the Bundeswehr will continue to be equipped with very good technical material. Overall it will, of course, become smaller, but in return more professional and more modern. Reductions in specific categories of weapons will be offset by new emphases, particularly qualitatively very valuable military goods with a distinctly defensive character: for example, systems for air defense as well as for monitoring disarmament measures.

But the federal government is taking the industry's concerns seriously. In its response to the SPD [Social Democratic Party of Germany] parliamentary group's Grand Inquiry of 20 June concerning arms and garrison conversion, it stated that in the event of rather large difficulties in the industrial conversion process it will endeavor to avoid fragmented developments by virtue of appropriate measures within what is legally possible. The capabilities of the defense budgets do, of course, set limits on these efforts. Financial assistance as well as substitute orders, as have been demanded, will not be possible.

In February the government established an interministerial task force under the leadership of the minister for economics to handle timely preparations in case flanking measures become necessary. In its other work this task force will also guarantee the necessary exchange of information with the laender and if necessary with the top municipal associations.

#### **Organizational Changes After 3 October**

The organizational problems in the arms sector which will develop after unification are of a fundamentally different kind than those of the territorial military administration. Basically the latter is transferring the same manner of decentralized structure as existed in today's FRG to the acceding part of Germany. As in the

area of each of the six existing defense sector administrations, local offices for the different sectors of responsibility are being established under a defense sector administration (for example, kreis armed forces recruiting offices, garrison administrations). The organizational elements of the territorial defense administration, as in today's FRG, will also take on the tasks of so-called decentralized procurement (for example, fresh food supply, vehicle repair, commercial expendable material).

The subordinate arms sector on the other hand is characterized by a centralized organization, which will basically remain unchanged when its areal sphere of responsibility is expanded; it will not be extended and it will be responsible for centralized procurement of all material for the now pan-German armed forces. The by-far predominant part of all activities in the BWB [Federal Office for Military Technology and Procurement] in Koblenz is being done in accordance with this principle. Deviations from this principle arise on the job because of economic and technical conditions.

Plans call for establishing an organizational unit of the BWB in the acceded part of German in order to make the best possible use of local knowledge of regional industry, the existing material, and the existing organizations and processes. The majority of the staff will be composed of local personnel from the procurement office. Six sectors of activity stand out for the organization, namely:

- Administration,
- Contract,
- Business,
- Equipment for NVA material which will continue to be used,
- Equipment for NVA material which is to be eliminated, and
- Administrative data processing.

In order to handle ministerial tasks locally, a departmental section for arms affairs is planned for the BMVg's branch office in Strausberg for the transitional period. This section will also be manned by staff employees from the sector of the current Ministry for Disarmament and Defense (MfAV). The ultimate shape and definition as well as the adaptation of structure and operational organization will develop after a first set of experiences.

### Salvaging of Defense Material

On a permanent or temporary basis it will be possible for the military services to use only a relatively small part of the NVA material. It is impossible to find an economic use for the remainder of the large inventories of material; this will likely stretch over several years.

On the one hand, it is first necessary to find markets for this currently foreign material, on the other hand, because of the special nature of the material, for

example, ammunition, there are naturally environmental protection regulations which stand in the way of immediate destruction.

Beyond that, in order to store the excess NVA material, storage capacities with the necessary infrastructure must be maintained or created. This requires establishing a storage organization, both for the safety and protection of the materials and to keep track of the rate of flow of the material.

After accession the "determinations on eliminating and salvaging Bundeswehr material," abbreviated as ABV, will also apply to the NVA material. The material which is scheduled to be salvaged will have to be examined in the prescribed manner in respect to possibilities for transferring it, in the following order:

- Shifting from department to department, especially to the Federal Minister of the Interior to equip the Federal Border Police in the acceded part of Germany and to the organizations which must be established by the laender there for protection from catastrophes.
- Shifts in the context of defense assistance. With various kinds of material, consideration can be given to deliveries in the context of defense assistance to the NATO partners, Greece, Turkey and Portugal.
- Deliveries in the context of assistance in equipping. This includes deliveries which are made available as the FRG provides equipping assistance, primarily for African countries. Of these, several have vehicles which come from Warsaw Pact countries.
- Finally, at issue are deliveries of material for humanitarian assistance which in the future will also be extended to countries of the Eastern alliance.

### New Tasks for VEBEG

Material which cannot be considered for any of these salvage possibilities will in principle be given to VEBEG GmbH., Frankfurt/Main, to sell. VEBEG is a subsidiary of the Industry-Administration-Corporation (IVG), in Bad Godesberg. Since it was established, the Bundeswehr has been using this company to market its rejected material and accumulated scrap metal.

As a rule, after a public invitation to bid it executes salvage contracts in a fiduciary manner with the greatest possible benefit to the country. In addition, even restricted invitations to bid as well as—in individual cases—direct orders without competitive bidding can—adjusted to special situations—be given a chance.

In preparing to salvage the former NVA material, VEBEG will have to receive support from the BWB in special cases. This will be necessary particularly in respect to salvaging ammunition.

The following kinds of material will be salvaged: poison and environmentally harmful substances, noncritical material and military weapons. The latter are subdivided into:

- Military weapons which are included in the VKSE negotiations and
- Military weapons which are to be destroyed in defined quantities within three years in annual quotas after the VKSE treaty is ratified by the 16 NATO and six Warsaw Pact countries (excluding the former GDR).

Disposing of poisons and other environmentally harmful substances—apart from ammunition—is not VEBEG's job, but rather is the responsibility of the Bundeswehr administration. In the territory of the former GDR this task will be assumed by the military district administration, which is to be established there, together with the garrison administrations which are subordinate to it. The tasks which fall to these agencies must not be underestimated. Since the specifics of the existing kinds of substances, which apparently are present in large quantities, are not yet completely known, it will be necessary after taking inventory to investigate which waste disposal processes must be used to get rid of them in an environmentally safe manner. The waste disposal capacities which are suitable to do this, for example, incineration plants and special waste dumps, in most cases do not yet exist; thus, they must first be planned, authorized and built. Developing economical waste disposal processes is a real challenge for the industry.

The tasks which will have to be accomplished in this sector will require a great deal of time, work, and substantial budgetary appropriations.

VEBEG will dispose of the noncritical material. It consists mainly of vehicles, technical equipment, clothing, and medical supplies. In part this material will accumulate in enormous quantities; thus, 70,000 to 75,000 wheeled vehicles alone will have to be salvaged.

Since VEBEG has not yet salvaged that kind of equipment and in such quantities, it must join us in considering new salvaging concepts which will be a challenge for all—including the industry.

The time frame for economical salvaging of all the material cannot yet be stated today with certainty. Currently VEBEG is proceeding on the basis that it will take at least five years for this.

Let us turn to military weapons, which are not subject to the VKSE treaty, as the next kind of material. Basically these will be made permanently unusable, that is, demilitarized, by the military service which is phasing them out. With ships this task is up to the naval shipyard. VEBEG will sell the demilitarized equipment as scrap.

Demilitarizing can also be done by the purchaser of the equipment, either on Bundeswehr terrain, for example, in a depot, or on the purchaser's property, for example,

a shipyard. In both instances this will be done under the supervision and control of the Bundeswehr.

In actual practice the buyer scraps the military weapons by omitting the demilitarizing phase. On the other hand, within the terms of the VKSE treaty bypassing this measure is not allowed when destroying weapon systems.

In the case of VKSE equipment a distinction must be made between destroying and scrapping. Destroying must be done separately because this measure—is prescribed in detail and—is subject to verification. Destroying is identical to demilitarizing, but is not a salvage measure.

Overall even here we are dealing with a large number of main battle tanks, other armored combat vehicles, artillery systems, tactical aircraft, and helicopters. The greatest share of this comes from the former NVA's weapon systems.

The Bundeswehr is planning to have the weapon systems destroyed and scrapped by commercial industry. For economic reasons a single entity is responsible for both measures.

Independently of verification, the Bundeswehr will monitor proper destruction and the established time limits and will keep complete records of destruction. Even scrapping destroyed weapon systems must not be left unsupervised for reasons of environmental protection.

Bundeswehr equipment from the army will probably be destroyed in the Hesedorf or Darmstadt depot, airborne equipment in Diepholz.

The NVA weapon systems are to be gathered together in a small number of facilities in the acceded territory, destroyed, and possibly scrapped there.

VEBEG will implement the restricted invitation to bid on destroying and scrapping following basic conditions which are to be determined by the BWB. In selecting the contractors, reliability, capacities, and know-how in respect to dismantling in an environmentally safe way will have to be examined.

If the contractor is not interested in marketing the parts which can still be used, then VEBEG will salvage them.

The invitation to bid on destroying and scrapping the NVA weapon systems in the acceded territory presupposes the reliability of this regional preference. In order to preserve jobs and infrastructure and to shorten transport routes the Ministry of Defense will propose to the Ministry of Economics that a waiver to the Contract Procedure for Performance (VOL) be given in so far as this preference is not generally given prior permission.

### Even Ammunition From the Soviet Armed Forces?

Several difficulties which confront all agency and business participants in connection with planning the destruction of the NVA ammunition should be enumerated here.

At the moment 300,000 to 350,000 tons of ammunition are anticipated. In addition, there is also talk of quantities as high as 1 million tons which could be left behind by the Western Forces of the Soviet Army.

We know that NVA ammunition consists of about 391 kinds with largely unknown chemical composition. These include stocks from World War II. There is even supposed to be ammunition from World War I.

What destroying such large quantities of ammunition means in the foreseeable future becomes clear from the fact that each year the Bundeswehr currently uses industry to disassemble only 1,000 to 2,000 tons of ammunition.

If one small-business enterprise, which until now has destroyed all Bundeswehr ammunition which was discarded, should disassemble only NVA ammunition, even if capacities were enlarged, decades would pass until the last shell left the ammunition storage site. Since in regard to storage, safety, and the costs associated with storage this is not in our combined interests, other interested parties, especially ammunition manufacturers, are also called upon to build up capacities and to develop environmentally-friendly and economical waste disposal processes.

Disassembly enterprises will be necessary in order to avoid transports and to shorten transport routes primarily in the territory of the former GDR. In this matter there is hope for a substantial commitment by industry in what was the FRG in order to cluster together the know-how which exists in both regions.

It should also be mentioned that because of the disarmament of weapon systems even the Bundeswehr will definitely reduce its accumulated ammunition inventories.

Since orders to manufacture ammunition will in the future no longer reach the order of magnitude of past years, disassembly and destruction of ammunition can provide a compensating factor for ammunition manufacturers. In this connection destroying ammunition can be viewed as part of the conversion of military manufacturing plants.

Because of the steadily growing requirements for destroying the accumulating explosives in a manner compatible with the environment, disposing of ammunition is becoming increasingly more cost-intensive. However, current and future difficulties are also present in the environmental protection sector.

The only enterprise at present which since 3 October is authorized to disassemble all kinds of ammunition

and—except for rocket fuels—is allowed to burn explosives in the open, is presently utilized to full capacity by orders from friendly armed forces in addition to destroying Bundeswehr ammunition.

Applying for permits, among other things in accordance with the Federal Act on Protection from Immissions, entails manifold and long-term checks by the licensing authorities of the processes, which the companies plan, and of the necessary structures, plants and facilities in order to guarantee safety and environmental compatibility for man, animals, plants, and cultural assets. This can result in a substantial time problem if the licensing procedures cannot be accelerated.

However, disassembling ammunition is, of course, defensible only if it is possible to dispose of the explosives which are thus set free in a manner which is not damaging to the environment. Today ammunition manufacturers can still burn in the open small quantities of explosives which accumulate while manufacturing ammunition.

In order to burn explosives which accumulate during disassembly, a permit to destroy these substances which are harmful to the environment is indispensable because of the Technical Directive, Air (TA-Luft) destruction can be done only in a special device with waste gas purification. Such facilities which are compatible with our standards do not yet exist on the world market. A new level of technology must be created here. Thus, industry is challenged to do everything it can in order to offer as soon as possible solutions to cope with the overall complex of ammunition salvage.

In the case of the large quantities of ammunition to be destroyed it is conceivable that in the future competitive disassembly contracts can be awarded as soon as disassembly capacities of more companies have been authorized.

As with all other types of salvage, we also accord absolute priority to reducing environmental pollutants when salvaging ammunition. Thus, there is an appeal to the German engineer's mind to develop on a priority basis in this sector, too, the necessary new technologies which are environmentally compatible.

### U.S. Plan To Veto UN Nuclear Test Ban Protested

*LD0701092191 Hamburg DPA in German 0902 GMT  
7 Jan 91*

[Text] Bonn (DPA)—Nuclear protesters blocked the main entrance to the U.S. Embassy in Bonn-Bad Godesberg on Monday morning. The 25 men and women occupied for about one hour the entrance and exit of the diplomatic mission. The demonstrators protested against the announcement that the United States would make use of its veto should agreement be reached at the UN conference on a halt in nuclear testing, which begins in New York today. In view of the consequences of

nuclear bomb tests, this veto was irresponsible. The members of the U.S. Embassy gained access to their workplaces through a side entrance.

## SWITZERLAND

### Effects of Nonproliferation Treaties Assessed

91WC0025A Zurich DIE WELTWOCHEN in German  
1 Nov 90 pp 7,9

[Article by Felix Mueller: "No Piece of Paper Stops a Merchant of Death"]

[Text] It is characteristic of one of the schizophrenic states of our times that one distinguishes between authorized and unauthorized weapons—as if death caused by a napalm bomb, at least as far as the result is concerned, were different from death caused by a nuclear bomb. Nevertheless, the attempt to draw such a distinction is a first step toward creating a world entirely devoid of weapons of mass destruction.

If one examines the arsenals of Iraq's Army from this point of view, one finds not only almost everything that is allowed but also everything that is not allowed. Contrary to the Geneva Protocol of 1925, which Baghdad signed, Iraq has employed poison gas extensively. Contrary to the treaty on biological weapons signed in 1972, Saddam Husayn is working on the development and production of such weapons, nor could the Nuclear Nonproliferation Treaty of 1970 prevent, in the opinion of Israeli and English experts, Iraq's being only two to five years from detonating a nuclear device. Is Iraq, consequently, proof of the futility of all efforts to block the proliferation of weapons of mass destruction with international treaties?

The Nuclear Nonproliferation Treaty, ratified in 1970 and so far signed by 170 countries, prohibits the release of nuclear weapons to others or any assistance in the development of such weapons. From the very beginning it was a flaw that two of the then five nuclear powers—China and France—remained on the side lines. It was part of France's foreign policy stance—considered brilliant in Paris—to help Iraq of all places in developing a civilian nuclear program. Israel, on the other hand, had no illusions from the start about the real purpose of this project and in 1981 destroyed with a daring bombing raid the Osiraq reactor in a suburb of Baghdad.

After this setback Saddam Husayn decided to follow the example of China and Pakistan by obtaining enriched uranium by a slower but less obvious method. This method first transforms uranium ore into uranium hexafluoride which is then processed by a battery of centrifuges into a type of enriched Uranium suitable for use in a nuclear bomb. There are indications that Pakistan shared some of its relevant expertise with Iraq and that Iraq returned the favor by passing on illegally acquired components. It is known that three German firms helped Iraq construct and operate gas centrifuges

which must have been of incalculable help to Baghdad since the process, while not especially difficult scientifically, is technically quite tricky. However, the fact that initial difficulties have been surmounted can be surmised from a minor incident that happened in London in the spring. At the last moment it was possible to intercept a shipment of special fuses suitable only for nuclear bombs. One is not likely to be concerned about fuses unless one thinks about igniting something at some time.

However, Iraq is but the last, though possibly the most unpredictable, candidate for the club of nuclear powers. Six additional countries—Argentina, Pakistan, Brazil, India, Israel, and South Africa—have acquired membership status since 1970, and it is assumed that India, Israel, South Africa and, most recently, also Pakistan have operational nuclear weapons.

One can, of course, consider this proof that the Nonproliferation Treaty has failed. Peter Herby, who follows the Geneva disarmament negotiations for the Quakers, expresses guarded optimism: "The treaty has at least delayed the proliferation of nuclear weapons." However, he thus concedes that the treaty has structural gaps and weaknesses. Its greatest shortcoming: "Only commerce in fissionable material is regulated. As long as this provision is observed, one cannot speak of treaty violations." Neither the supplier of gas centrifuges nor the supplier of uranium hexafluoride violates the letter of the Nonproliferation Treaty. Herby explains: "Although as a result of informal discussions most industrial nations have placed critical products under export controls, specific enforcement is handled by the individual countries. If a country looks the other way, international law does not apply." An instructive example of how different standards are applied to such laws is offered by Brazil, which has exported a considerable amount of nuclear technology to Iraq, technology which it originally acquired from the Federal Republic of Germany for a civilian project.

In five years the treaty signatories will have to decide on its fate. The negotiations are not likely to be simple, especially since the refusal of the United States and Great Britain to engage in lateral discussions about a nuclear test ban complicates the issue. However, the authors of a study just published in Germany come to the conclusion that an extension, "despite the treaty's undeniable flaws," is greatly preferable to any attempt to renegotiate, since "without a treaty it would probably be even more difficult to stop the proliferation of nuclear weapons."

The situation is similar with regard to biological weapons. An agreement was concluded in Geneva in 1972 which banned not only the production but also the development of such weapons. Western intelligence services are convinced that Saddam Husayn will soon have operational biological weapons at his disposal. Aside from such laboratory equipment as incubators, drying

chambers, nutrient solutions, and fermentation facilities—acquired in Germany—Baghdad, in 1985, obtained three portions of the West Nile Fever virus from the Center for Disease Control in Atlanta and, two years later, Josef Kuehn of Neustadt, Lower Saxony, delivered 100 milligrams each of the highly poisonous mushroom poisons (mycotoxin) HT-2 and T-2 to the same address for barely 60,000 German marks [DM]. The “scientific interest” with which Baghdad justified its purchases could, in the opinion of the Stockholm Sipri [Stockholm International Peace Research Institute] peace institute, aim in only one very specific direction: Mycotoxins, even if only minute quantities touch the skin, are guaranteed deadly and, therefore, are particularly well suited for sabotage missions. Recently a CIA study came to the conclusion that within a few months Iraq will have developed operationally ready biological weapons, particularly anthrax which can cause possibly fatal bleeding. Moreover, work on food-poisoning agents or substances, which can cause the plague, cholera, anthrax, or typhoid, seems well-advanced.

Technically Iraq may not even have violated the 1972 agreement since that agreement does not prohibit biological weapons research. At what point research ends and development begins is, of course, a wide-open question. Here, too, the negotiators have failed to define effective control procedures. So far, however, there has been no real proliferation of biological weapons, one reason being, in the opinion of English expert Julian Robinson, that bacteria and viruses are not good weapons: “One employs a living organism to attack another living organism. Many unpredictable events could occur and generals prefer resources which they can control.” However, whether a cornered Saddam Husayn might lose all control, is the anxious question behind all the current gas mask drills in the Saudi Arabian desert.

In contrast to biological weapons, the world has already acquired considerable experience with the effects of chemical weapons. At the turn of the century the first experiments to exploit chemistry militarily also triggered the first attempts to stop such a development which did not deter the German Imperial Army from employing mustard gas in 1915 in an attempt to penetrate the French lines near Ypres. Two years later both parties were shooting poison gas grenades at each other. Images of dead and wounded soldiers so inflamed world public opinion that the Geneva Protocol was negotiated in 1925 to ban the employment of all chemical weapons. However, the agreement was violated for the first time by the Duce [Mussolini] in Abyssinia no more than 10 years later.

All large powers had chemical weapons in their arsenals at the outbreak of World War II. Those of the Soviet Union were the result of German “development assistance” in the wake of the Rapallo Pact. They were not used [in World War II] since both sides had serious reservations about their military utility. Instead, the Nazis applied their knowledge to the “Final Solution” of the Jewish problem. Millions of people were murdered in

concentration camps with a modified insecticide called Zyklon-B. This use seemed at last to be sufficiently persuasive to declare poison gas taboo.

However, to Mark Storella, who handles this subject in the State Department in Washington, it seems that “such restraint has rapidly decreased in the seventies and eighties. Egypt used poison gas in Yemen, the Soviet Union apparently in Afghanistan, Vietnam in Cambodia and Laos, and—most important—Iraq (and Iran) in the Gulf War.” How did Saddam Husayn acquire these weapons? With German engineering skill and German export acumen. German “merchants of death” placed no less than six production facilities in the sand of Iraq and these “petrochemical” plants produce not only such traditional poisons as mustard gas or the nerve gas Tabun but also highly concentrated hydrogen cyanide which can destroy the filters of ordinary gas masks.

The obvious weakness of the Geneva Protocol—it only prohibits the employment but not the production of chemical weapons—led in the mid-sixties to the inclusion of chemical weapons in deliberations of the Geneva disarmament conference. These efforts were made all the more difficult by the fact that till the mid-eighties nobody except the United States—which, however, had discontinued production in 1969—admitted owning such weapons.

The Soviet Union, on the other hand, greatly expanded its supplies in the years that followed which finally induced Ronald Reagan in 1984 to give the green light to a resumption of production. He showed political acumen by combining this decision with a proposal for a total ban and by promptly submitting an appropriate treaty draft.

Moscow did not respond at first; but then came glasnost and with it the admission of considerable activity in this area. It did not stop there, the Soviet Union suddenly joined the side of the United States in Geneva. Thus, a decisive breakthrough had apparently been made.

However, the conclusion of a treaty still remains slow in coming. The chief of the American delegation in Geneva, Ambassador Stephen J. Ledogar, commented that he arrived in Geneva early this year feeling “great optimism and enthusiasm” but that these sentiments have since been replaced by much more sober emotions because “only very modest progress has been made.” Other voices even claim that the negotiations are “simply bogged down.”

Why? One reason is the devilish nature of the details. The production of chemical weapons is relatively easy and based on processes and substances which also have civilian applications. A ban, therefore, only has a chance to be really effective if the treaty provides for rigorous controls at short notice. But where do controls end and where does industrial espionage begin? Not even the United States has so far accepted the principle of a completely open laboratory door, although “challenge inspections” constituted the central element of its 1984



treaty draft. How much more are the advanced developing nations likely to be afraid that such a system of inspections would indefinitely allow industrial nations to hold pesky competition at bay?

An additional complication for the negotiations is the ploy used primarily by Arab nations tying their own chemical weapons to Israel's nuclear weapons. Does this make chemical weapons "the nuclear bomb of the poor?" Mark Storella rejects such claims categorically: "These weapons are not comparable. Nuclear weapons are incomparably more devastating."

The conflict between owners of chemical weapons and the have-nots is further exacerbated by the American proposal that 98 percent of their arsenals be destroyed within eight years after the signing of a treaty in Geneva and the remainder "after all countries which dispose over a corresponding production capacity have signed the treaty." One recognizes the underlying idea—insurance against blackmail as well as an incentive for those who hesitate—but one can also understand the suspicion of small countries that the large powers thereby want to keep an escape door open which to some extent allows them to circumvent the treaty.

Today the Soviet Union in Geneva is on the side of the United States on almost all issues. If the negotiations are nevertheless stalled, it is because of an anticipated new world-power alignment. Ambassador Ledogar thinks that "a North-South contrast is developing to an ever greater extent." He is still optimistic that a new treaty draft will finally be ready by the end of 1991. Not a moment too soon, according to Peter Herby: "If no results are achieved within the next one and one half years, it will become ever more difficult to negotiate any kind of treaty because of the rapid spread of chemical weapons."

However, all these weapons have only limited utility if they cannot be employed over longer distances. Consequently, arms control efforts in recent times have more and more included commerce in missile technology as well. Here, too, Iraq has the dubious distinction of being the first to make the world really aware of this problem. When Saddam Husayn in 1987 began to shower Iran with modified Soviet Scud-B missiles in "The War of the Cities," he initiated the ballistic age for Third World conflicts. Since then Baghdad has tested the first stage of an intercontinental missile, which is a testimony to the efficiency of support provided by Egyptian, Brazilian, and German engineers. The professional journal, *INTERNATIONAL DEFENSE REVIEW*, commented that this event has "sent shivers through all the world's ministries of defense, since it threatens to drastically change the Middle Eastern balance of power."

The CIA estimates that at least 15 countries—including Argentina, South Korea, Brazil, Pakistan, and Egypt—will have their own ballistic missiles by the year 2000. The United States quickly reacted during the "War of the Cities" and succeeded in hammering out a Missile

Technology Control Regime (MTCR) treaty—signed by seven countries: Canada, France, Germany, Italy, Japan, Great Britain, and the United States—to regulate exports in this area. But as long as more countries have not signed this agreement, its success, too, will be limited.

As in the case of chemical weapons, this case also demonstrates a central problem of today's arms control discussions: How should so-called "dual use" products—products which have civilian as well as military applications—be treated by international treaties? Iraq has demonstrated that once a country has reached a certain level of industrialization, it is no longer dependent on the import of finished weapon systems but can produce these systems itself simply by purchasing "civilian" technologies. Rene Pasche, from the Department for Foreign Affairs in Bern, offers a graphic explanation: "Today, one automatic rifle and a few computerized machine tools are all that is needed to procure masses of rifles." All the fertilizer plants that have been delivered to Iran may really be fertilizer plants, but they are easily converted into production facilities for poison gas. It may be that the pieces forged by the Meccanica foundry were really gear blanks, but nothing seems to be in Saddam's way to use them for his own "dicke Bertha" [German colloquialism for a very big gun].

While in Europe the view prevails that with the end of the Cold War rearmament has also ended, American proliferation expert Gary Milhollin believes that the arms race between East and West has simply been replaced by an arms race between North and South. This is not the least important reason why the United States continues to maintain rather rigid controls over the export of technology. Other industrial nations, however, are doing very little in this regard. Bonn, for instance, was for a long time only interested in placing as few obstacles as possible in the way of the German export machine. Insistent pressure to dismantle the Cocom [Coordinating Committee for Multilateral Export Controls] regulations was therefore applied, regulations which are supposed to prevent export of strategic items to the East Bloc. This summer the Kohl administration finally prevailed. Since then, according to Gary Milhollin it has been possible, "to sell nuclear fuses like bags of onions" to Poland from where they can then be dispatched without trouble to interested countries such as Libya, Iraq, or Pakistan.

To stop this practice as far as possible and prevent an explosive expansion of weapons of mass destruction in the Third World, Milhollin proposes a new "Cocom barrier" to include both the East and the West. "This new group would pursue the two goals of keeping the Third World as free of nuclear bombs and launch delivery vehicles as possible and to promote trade between member states." The problem with this proposal is, of course, that it is highly discriminatory and that it threatens to retard the economic development of the Third World.



It would, no doubt, help if all industrial nations were to adopt export laws patterned after those of the United States. The almost unending series of revelations of the activities of German "merchants of death," has at least induced Bonn to tighten the screws a little. However, the poison gas factories in Egypt (built with Swiss participation), in Iraq, in Iran, and in Libya exist; the first nuclear devices have already

been detonated in the Third World; operationally ready poison gas bombs are deployed on the Iraqi side with front-line troops. In other words, the prolonged negotiations in Geneva and elsewhere are now only attempts to limit the damage, that is all. Some day soon the industrial countries may realize that the greatest threat no longer emanates from the superpowers but from their own exports.